# CONCEPTUAL DESIGN MODEL FOR YOUTH PERSONAL DECISION AID

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# Abstrak

Remaja cenderung untuk menghadapi pelbagai bidang membuat keputusan dengan mempunyai pelbagai pilihan. Walau bagaimanapun, alat membuat keputusan yang sedia ada terlalu kompleks dan tidak mudah difahami oleh golongan remaja. Selain itu, teknik-teknik matematik yang kompleks dan berstruktur tidak disukai oleh pengguna berbanding model reka bentuk secara terus dan mudah. Tambahan pula asas teori untuk membuat keputusan tidak banyak diamalkan dalam merekabentuk dan membangunkan teknologi bantuan keputusan. Oleh itu, terdapat keperluan dalam mempertimbangkan teknik kriteria pelbagai, model dan teori dalam pembangunan bantuan keputusan peribadi. Matlamat utama kajian ini adalah untuk membina satu model reka bentuk konsep untuk Bantuan Keputusan Peribadi Remaja (YouthPDA). Berikut adalah objektif yang telah digariskan untuk menyokong matlamat utama: i) untuk mengenal pasti teknik, kriteria, dan asas teori yang berkaitan membuat keputusan untuk YouthPDA, ii) membina model reka bentuk konsep untuk YouthPDA dengan menggunakan pembuatan keputusan yang dikenal pasti, kriteria, teknik, dan asas teori yang telah dikenal pasti, iii) mengukur model reka bentuk konsep YouthPDA melalui penilaian pakar dan, iv) mengesahkan hubungan antara dimensi dari segi kebergunaan model reka bentuk konsep menggunakan prototaip. Penyelidikan Rekabentuk telah dipilih sebagai pendekatan dan tiga fasa utama yang digunakan adalah Mengenalpasti Masalah, Merekabentuk Penyelesaian dan Penilaian. YouthPDA dibangunkan sebagai bantuan keputusan peribadi untuk remaja bagi membantu mereka memilih bidang pengajian dan laluan kerjaya mereka. Dengan menggabungkan data daripada pelbagai jenis personaliti dan kecerdasan, YouthPDA berfungsi sebagai sistem saranan yang menggunakan penaakulan berasaskan peraturan. Kebergunaan YouthPDA diukur dalam fasa penilaian. Hasil penilaian daripada 189 responden menunjukkan bahawa YouthPDA yang dicadangkan adalah berguna sebagai alat membuat keputusan untuk remaja. Ketepatan, Strategi Membuat Keputusan, Kepuasan, Pengetahuan Perolehan dan Kebergunaan Secara Keseluruhan adalah dimensi-dimensi yang diukur dan dikaitkan untuk mengemukakan kesimpulan. Teknik kriteria pelbagai, teknik dan teori yang telah dipilih terkandung bersama dalam model reka bentuk konsep yang disahkan dan prototaip YouthPDA sebagai sumbangan utama kajian ini.

**Kata kunci:** Model konsep reka bentuk, Bantuan keputusan peribadi, Kriteria membuat keputusan, Teknik membuat keputusan, Teori membuat keputusan.

# Abstract

Youth tend to face many areas of decision making with multiple choices. However, existing decision making tools are too complex and are not easily understood by the youth. Besides, complex and structured mathematical techniques are not preferred by the users as compared to direct and straightforward design model. Additionally, theoretical foundation for decision making is not adequately considered in designing and developing decision aid technologies. Therefore, there is a need in considering and including relevant multi-criteria technique, model and theory in the development of personal decision aids. The main aim for this study is to construct a conceptual design model for Youth Personal Decision Aid (YouthPDA). The following objectives are outlined to support the major aim: i) to identify relevant decision making criteria, techniques, and theoretical foundations for YouthPDA, ii) to construct a conceptual design model for YouthPDA using the identified decision making techniques, criteria, and theoretical foundation, iii) to validate the conceptual design model of YouthPDA through expert review, and iv) to measure the correlation between usefulness dimensions of YouthPDA via prototyping. Design research is chosen as the approach and three main phases are adopted which are Problem Identification, Solution Design, and Evaluation. YouthPDA is developed as a personalised decision aid for youth to help them choose their study and career paths. By integrating data from the youth personality traits and multiple intelligences, YouthPDA functions as a recommender system that works on rule-based reasoning. The usefulness of YouthPDA is measured in the evaluation phase. Findings from 189 respondents show that the proposed YouthPDA is useful for youth as their decision making tool. Accuracy, Decision Strategy, Satisfaction, Knowledge Acquisition and Overall Usefulness are the dimensions being measured and correlated to put forward the conclusion. The selected multi-criteria, techniques and theories embedded into the validated conceptual design model are the main contributions of this study.

**Keywords:** Conceptual design model, Personal decision aid, Decision making criteria, Decision making technique, Decision making theory.

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# List of Publications

The following are a few publications related to this study that have been published in journals and proceedings:

**JOURNALS**

1. **Norfiza, I.**, Siti Mahfuzah, S., & Norshuhada, S. (2016). Design Model of Computerized Personal Decision Aid for Youth: An Expert Review. European Proceedings of Social & Behavioural Sciences. International Journal of Interactive Digital Media (IJIDM). In press.

2. Siti Mahfuzah, S., **Norfiza, I.**, & Norshuhada, S. (2015). Measuring Helpfulness of Computerised Personal Decision Aid for Youth. Jurnal Teknologi. **(SCOPUS)**

3. **Norfiza, I.**, Norshuhada, S., & Siti Mahfuzah, S. (2015). PERSONAL DECISION SUPPORT: AN INTELLIGENT PERSONALITY DECISION AID. *International Journal of Conceptions on Management and Social Sciences.* Vol. 3, Issue. 2, April 2015; ISSN: 2357 – 2787

4. **Norfiza, I.**, Norshuhada, S., & Siti Mahfuzah, S. (2015). INITIAL DESIGN MODEL OF HYBRID INTELLIGENT DECISION AID. *ARPN Journal of Engineering and Applied Sciences.* Vol. 10, No. 3, February 2015, ISSN 1819-6608 **(SCOPUS)**.

**PROCEEDINGS**

1. **Norfiza, I.,** Siti Mahfuzah, S., & Norshuhada, S. (2016). DESIGN MODEL OF COMPUTERIZED PERSONAL DECISION AID FOR YOUTH: AN EXPERT REVIEW. International Conference on Soft Science 2016 (ISSC'16). 11-13 April, Langkawi.

2. **Norfiza, I.,** Norshuhada, S., & Siti Mahfuzah, S. (2014). INITIAL DESIGN MODEL OF HYBRID INTELLIGENT DECISION AID. Advancement in Information Technology (2014 ADVCIT) 2014, 16-18 December, Bandung, Indonesia.

3. **Norfiza, I.,** Ahmad Affandi, S., Siti Mahfuzah, S., Norshuhada, S., Haslina, M., Azizi, A.Z., & Syamsul Bahrin, Z. (2014). INTEGRATING MULTIPLE INTELLIGENCES AND PERSONALITY TRAITS IN A DYNAMIC PERSONAL DECISION AID FOR YOUTH. Knowledge Management International Conference (KMICe) 2014, 12-15 August, Malaysia. ISBN: 978-983-2078-92-0, eISBN: 978-983-2078-93-7, pg: 769-801

4. **Norfiza, I.,** Norshuhada, S., Siti Mahfuzah, S., Syamsul Bahrin, Z., Azizi, A.Z., & Haslina, M. (2013). YOUTH PERSONAL DECISION AID (YOUTHPDA): THE PREFERRED YOUTH DECISION MAKING AREAS. International Conference on Computing and Informatics (ICOCI), Sarawak. ISSN: 2289-3784, ISBN: 978-983-2078-78-4, eISBN: 978-983-2078-79-1, pg: 215-221

# Awards and Recognitions

The following are a few projects related to this study that have been awarded at both national and international levels:

## GOLD

1. **GOLD** Medal, Malaysia Technology Expo (MTE2014), Malaysian Association of Research Scientist. (Youth Personal Decision Aid (Y-PDA): A Personalized Study & Career Decision Making Tool)
   PWTC,KL (20-22 February 2014)

## SILVER

1. **SILVER** Medal, International Innovation Technology Exhibition (ITEX 2014), Malaysian Invention & Design Society. (Community Service for Youth: Integrating Multiple Intelligence & Personality Traits in a Computerized Personal Decision Aid for Youth)
   KLCC, KL (8-10 May 2014)

## BRONZE

1. **BRONZE** Medal, International Conference and Exposition on Inventions by Institutions of Higher Learning (PECIPTA 2015), Ministry of Education. (YouthPDA: An Innovative Approach to Future Study and Career)
   KLCC, KL (4-6 December 2015)

2. **BRONZE** Medal, (iCompEx 2015), Politeknik Sultan Abdul Halim. (YouthPDA: A Community Service for Youths in Study and Career Decision Making)
   Politeknik Sultan Abdul Halim, Jitra (24 – 26 March 2015)

# CHAPTER ONE
# BACKGROUND OF STUDY

## 1.1    Introduction

Decisions play an essential part of human daily activities and making a definite choice out of any condition is certainly obligatory. Today, most of the business involves technology that includes decision making as many decision aid tools can be found to assist people making decision. Currently, more decision aid technology can be produced on the basis of assisting mankind to make decision as technologies are more user-oriented than before.

Computer and internet have played a very vital role in enlightening and simplifying the life of people. Information Technology specifically has made people's activities more easy, simple and flexible. These activities include dealing with assisting people in decision making. According to Zhang, Miao, and Luo (2011), the development of personalized recommendation technology is to recommend more valuable information to meet user's personalized demand.

Personal decision aid (PDA) is a system that might help users in assisting them to make decision in multiple areas of decision making by sorting out the available choices. Chen, Hu, Kuo, and Liang (2010) define a decision aid as online computer-based software which is able to identify appropriate option automatically from numerous product alternatives based on specific criteria. A personalized decision system considers individual's consumer preferences in order to support them in decision making.

The contents of the thesis is for internal user only

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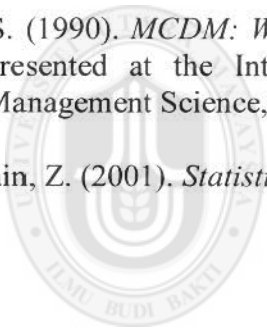
# APPENDIX A

## Instrument for Preliminary Study

# Preliminary study on Personal Decision Aid (PDA) for youth

The major aim of this preliminary investigation is to identify area that is most applicable for youth to utilize the personal decision aid (PDA). Besides, this preliminary investigation will discover the aid types in each of the mentioned area.
* Required

## The instrument consists of 3 parts. Please answer ALL questions.

Please tick the appropriate answer

## PART A

Background

1. Gender *

○ Male
○ Female

2. Age *

_____

3. Race *

○ Malay
○ Chinese
○ Indian
○ Sabah/Sarawak
○ Other:

4. Education *

○ Secondary school
○ Diploma
○ Bachelor degree
○ Master degree
○ Doctorate degree (PhD)
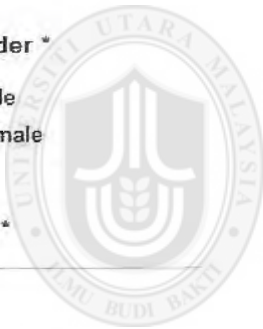
**5. Employment Status** *

○ Unemployed

○ Employed

○ Self-employed

○ Student

## PART B

Decision Making

**6. Have you made your own personal decision in any of the following? (You may choose more than one)** *

☐ Study

☐ Career

☐ Lifestyle (e.g. fashion, music, sport, etc)

☐ Purchasing (e.g.gadget, car, etc)

☐ Friendship

☐ Politic

☐ Religion

☐ Marriage

**7. How is your decision normally made? (You may choose more than one)** *

☐ Decide on your own

☐ Get advice from parents/family

☐ Get advice from friends

☐ Get advice from Professional advice (e.g. counsellor/technology)

**8. Decision aid is a way in helping a person to make decision by sorting out the available choices. In your opinion, do you need an aid in order to help you sort out the decision?** *

○ Always

○ Sometimes

○ No
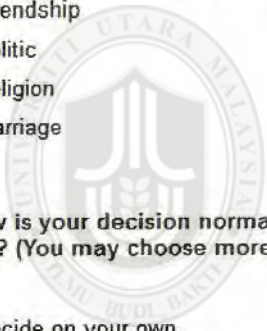
**9. Personal Decision Aid is a computerized system that will assist a person by providing the best suggestion based on the list of options provided by them. If the intended system is available, would you use the personal decision aid? \***

○ Yes

○ No

**10. If your answer in question 9 is 'Yes', please tick the area that you might be interested in getting a personal decision aid. (You may choose more than one)**

☐ Study

☐ Career

☐ Lifestyle (e.g. fashion, music, sport, etc)

☐ Purchasing (e.g.gadget, car, etc)

☐ Friendship

☐ Politic

☐ Religion

☐ Marriage

☐ Other: _____

**11. Currently, there are plenty of Personal Decision Aid (PDA) published on the web especially in searching for partner, purchasing, as well as education namely MalaysianCupid.com, AsianDating.com, Hunch, Let Simon Decide, Choose It!, EduTools Education, Super Decision and many more. Are you aware of any of above mentioned PDAs? \***

○ Yes. (If 'Yes' go to question 12 and 13)

○ No. (If 'No' go to question 13)

**12. Have you tried using any of the decision aid before?**

○ Yes

○ No

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**13. In your opinion, would such aid be** *

○ necessary

○ probably necessary

○ unnecessary

# PART C

Given here are the areas that might become your PDA. Briefly state how can the PDA aid you?

**14a. Study**

example: choice of program, list qualified programs

_____

**14b. Career**

example: choice of career based on your qualification

_____

**14c. Lifestyle**

example: choice of fashion, list of suitable sports

_____
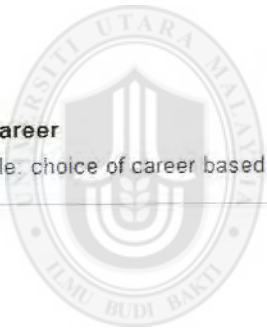
**14d. Purchasing**

example: choice of hand phone, tablet, car

---

**14e. Friendship**

example: choice for a special best friend

---

**14f. Politic**

example: list of political view

---

**14g. Religion**

example: choice of religion

---

**14h. Marriage**

example: suggest the best couple

---

**Please give your own area of interest to use the PDA**

How can the PDA aid you?

---

**Thank you for your cooperation**

Submit
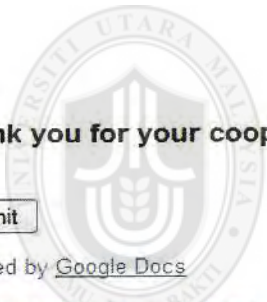
# APPENDIX B

## Official Appointment Letter by Dean

**KEDAH AMAN MAKMUR • BERSAMA MEMACU TRANSFORMASI**

UUM/CAS (SMMTC)/P-48
January 12, 2015

Dr. Azizol bin Abdullah
Timbalan Dekan (Akademik dan HEP)
Fakulti Sains Komputer & Teknologi Maklumat
Universiti Putra Malaysia
43400 Serdang
Selangor

Dr.,

**APPOINTMENT AS EXPERT REVIEWER FOR DYNAMIC AND MULTI-CRITERIA DESIGN MODEL OF YOUTH PERSONAL DECISION AID (YouthPDA)**

Thank you for agreeing to involve as an expert in a PhD study with the following details:

| | |
|---|---|
| Student Name | : Norfiza Ibrahim |
| Matric No | : 94054 |
| School | : Multimedia Technology and Communication, Universiti Utara Malaysia |
| Research Title | : DYNAMIC AND MULTI-CRITERIA DESIGN MODEL OF YOUTH PERSONAL DECISION AID (YouthPDA) |
| Supervisor | : Prof. Dr. Norshuhada Shiratuddin and Dr. Siti Mahfuzah Sarif |

For your information, the student will use that model for her research and need your expertise to review the proposed model in a few dimensions as stated in the reviewing form.

Your cooperation, time and assistance are greatly appreciated.

Thank you.

Sincerely,

**DR. ROSLI BIN MOHAMMED**
Dean         12.1.2015
School of Multimedia Technology and Communication
UUM College of Arts and Sciences
Universiti Utara Malaysia

c.c.:   Prof. Dr. Norshuhada Shiratuddin, Supervisor 1
        Dr. Siti Mahfuzah Sarif, Supervisor 2

Universiti Pengurusan Terkemuka
*The Eminent Management University*

# APPENDIX C


## Consent Form
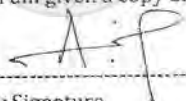
| Document No. | Consent Form of Expert Reviewer for Design Model |
|---|---|
| **01** | of Youth Personal Decision Aid (YouthPDA)<br>School of Multimedia Technology and Communication<br>UUM College of Arts and Sciences<br>Universiti Utara Malaysia (UUM) |

1. I have accepted the official appointment letter from UUM. With the expertise and existing knowledge that I have, I volunteer to be an expert reviewer for "Dynamic and Multi-criteria Design Model of Youth Personal Decision Aid (YouthPDA)" proposed by Norfiza Ibrahim under supervision of Prof. Dr. Norshuhada Shiratuddin and Dr. Siti Mahfuzah Sarif, Universiti Utara Malaysia (UUM).

2. I understand that the expert review process is designed to gather information and feedbacks in improving the proposed model.

3. I understand that no part of the proposed model may be reproduced, stored in retrieved system, or transmitted in any form or by any means, electronic, mechanical photocopying, recording, or otherwise, without prior permission from the researcher and her supervisors.

4. I understand that the researcher will not identify me by name in any report using information obtained from the questionnaire, and that my confidentiality as a participant in this study will remain secure. Subsequent uses of records and data will be subjected to standard data use policies which protect the anonymity of individuals and institutions.

5. I understand that this study has been reviewed and approved by the School of Multimedia Technology and Communication, College of Arts and Science, UUM.

6. I have read and understood the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

7. I am given a copy of this consent form.

---
My Signature

11 - 8 - 2015
---
Date

DR. AZIZOL ABDULLAH
Deputy Dean
(Academic and Student Affairs)
Faculty of Computer Science and Information Technology
Universiti Putra Malaysia
My Printed Name and Official Stamp

---
Signature of the Researcher

For further information, please contact:
norfiza.ibrahim@yahoo.com/ shuhada@uum.edu.my

# APPENDIX D

## Usefulness Instrument

## Measuring Usefulness of Youth Personal-Decision Aid (YouthPDA) Prototype in Selecting Study and Career

| | |
|---|---|
| Researcher's Name | : Norfiza Ibrahim |
| Department | : School of Multimedia Technology and Communication Universiti Utara Malaysia, Sintok |
| Email | : norfiza.ibrahim@yahoo.com |

### Purpose

The purpose of this study is to measure the usefulness of the proposed YouthPDA in selecting study and career for youth. The proposed YouthPDA is divided into two areas named Study and Career. This study forms is part of Norfiza Ibrahim's PhD research at Universiti Utara Malaysia.

### Procedures and Use

You have been invited to participate in this project. Participation involves completing an experiment. The experiment will take approximately 1 hour.

You are required to use both categories in YouthPDA application, i) Study and ii) Career to help you in deciding your study and career for your future. There are Personality Test and Multiple Intelligence Test that need to be fulfilled before you are allowed with the decision process. Please answer all the questions in the given test.

All of your details and responses will be completely confidential, and never shared with anyone else.

### Consent

The completion of the experiment implies that you have read the above information, you have agreed to participate in this project and you understand and agreed to all the terms and conditions.

### Queries or Concerns

If you have any queries or concerns about the research, please contact the above named researcher.

**Have a nice day and thank you for participating!**

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**Borang Soal Selidik untuk mengukur KEBERGUNAAN YouthPDA**
*Questionnaire for Measuring USEFULNESS of YouthPDA*

**Demografi Responden/Respondent's Demographic**
**(Tandakan jawapan yang paling sesuai/Tick your answer where appropriate)**

Umur/Age: _____

Jantina/Gender :
(        ) Lelaki/Male
(        ) Perempuan/Female

Tahap Pendidikan/Education Level:
(        ) Ijazah Sarjana Muda/Bachelor Degree
(        ) Diploma/Diploma
(        ) Sekolah Menengah / Secondary School

Status Pekerjaan/Employment Status:
(        ) Tidak bekerja/ Unemployed
(        ) Bekerja/ Employed
(        ) Pelajar/ Student

**ARAHAN**: Bulatkan nombor yang paling sesuai dengan jawapan pilihan anda bagi setiap pernyataan di bawah. Sila gunakan skala berikut:

*INSTRUCTION: Circle the number that fits your response best for each statement. Use the following scale:*

**7**-Sangat setuju/*Strongly agree*
**6**-Setuju/*Agree*
**5**-Agak setuju/*Fairly agree*
**4**-Tidak pasti/*Undecided*
**3**-Agak tidak setuju/*Fairly disagree*
**2**-Tidak setuju/*Disagree*
**1**-Sangat tidak setuju/*Strongly disagree*

| Kriteria-kriteria/Criteria | Skala/*Scale* | | | | | | |
|---|---|---|---|---|---|---|---|
| **A. Ketepatan/ Accuracy** | | | | | | | |
| 1) Aplikasi ini boleh diharapkan untuk berfungsi sebaiknya. *This application can be relied to function properly.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2) Aplikasi ini sesuai dengan cara saya membuat keputusan. *This application is suitable to my style of decision making.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3) Aplikasi ini menyediakan bantuan yang diperlukan untuk saya membuat pilihan. *This application provides the help that I need to make a selection.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4) Aplikasi ini menyediakan nasihat yang diperlukan untuk saya membuat pilihan. *This application provides the advice that I require to make my decision.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5) Aplikasi ini sesuai digunakan walaupun ketika masa terhad untuk membuat keputusan. *This application is suitable even during limited time to make a decision.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **B. Strategi membuat keputusan/ Decision Strategy** | | | | | | | |
| 5) Bagi saya, proses membuat keputusan dalam aplikasi ini adalah logik. *The decision process in this application is logical to me.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6) Bagi saya, proses membuat keputusan dalam aplikasi ini adalah mudah. *The decision process in this application is simple to me.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7) Saya memahami proses membuat keputusan yang ada dalam aplikasi ini. *I understand how decision process in this application works.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8) Saya dapati justifikasi keputusan yang diperolehi daripada aplikasi ini sangat mudah diinterpretasikan. *I found it very easy to interpret the decision justification provided by this application.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **C. Kepuasan/ Satisfaction** | | | | | | | |
| 9) Saya yakin dengan pilihan yang disyorkan. *I am satisfied with the recommended solution.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10) Saya yakin dapat membuat pilihan dengan bantuan aplikasi ini. *I am confident that I am able to make selection with this application.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11) Saya yakin dapat menjelaskan pilihan saya dengan bantuan aplikasi ini. *I am confident that I can justify the selection that I made with this application.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12) Saya sangat berpuas hati dengan pengalaman menggunakan aplikasi ini. *I am very pleased with my experience using this application.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| **D.** | **Pemerolehan / Knowledge Acquisition** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 13) | Aplikasi ini menyedarkan saya bahawa adalah sukar untuk memperolehi semua kelebihan melalui satu pilihan. *This application makes me realize I cannot get everything from just one alternative.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14) | Aplikasi ini memperlihatkan proses separa sedar saya semasa membuat keputusan. *This application shows my subconscious decision process.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15) | Aplikasi ini membantu supaya saya tidak mudah dipengaruhi oleh orang lain semasa membuat pilihan. *This application helps me not to be easily influenced by others in making selection.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16) | Aplikasi ini membuatkan saya kurang bergantung kepada orang lain semasa membuat pilihan. *This application makes me more independent of others in making a selection.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17) | Banyak yang saya pelajari mengenai masalah ini dengan menggunakan aplikasi ini. *I learned a lot about the problem using this application.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **E.** | **Kebergunaan secara keseluruhan/Overall *usefulness*** | | | | | | | |
| 18) | Aplikasi ini membantu saya untuk membuat pilihan. *This application is capable of helping me in making a choice.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 19) | Aplikasi ini membolehkan saya untuk menilai keputusan yang dibuat dengan teliti. *This application allowed me to carefully consider the decision made.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20) | Saya percaya masalah membuat pilihan telah diselesaikan. *I feel that the problem in making selection is solved.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21) | Aplikasi ini ialah alat bantu yang menjelaskan apa yang saya kehendaki. *This application is an aid for me in clarifying what I want.* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Secara amnya/In general
(Bulatkan jawapan anda/Circle your answer)

| | | | |
|---|---|---|---|
| 1. | Saya akan menggunakan aplikasi ini lagi di masa akan datang. I will use this application again next time. | Yes | No |
| 2. | Semua orang patut merujuk kepada aplikasi seperti ini sebelum memilih pengajian/kerjaya yang sesuai. Everyone should confer with this kind of application before choosing a study/career. | Yes | No |
| 3. | Saya bersetuju yang penggunaan aplikasi ini membantu memendekkan masa untuk membuat pilihan. I agree that this application helps to reduce the time to make decision. | Yes | No |

**SOALAN TAMAT**
**END OF QUESTIONS**

# APPENDIX E

## Expert Review Form

| Document No. | **Expert Review Form of YouthPDA Design Model** |
|:---:|:---:|
| **03** | School of Multimedia Technology and Communication<br>UUM College of Arts and Sciences<br>Universiti Utara Malaysia (UUM) |

**Dear Prof. Dr. / Dr.,**

**EXPERT REVIEW OF YOUTHPDA DESIGN MODEL**

I am Norfiza Ibrahim and currently pursuing PhD study in Multimedia at Universiti Utara Malaysia. My PhD research proposes the Design Model for Youth Personal Decision Aid (YouthPDA). It is aims to provide a design model in order to develop a decision aid that specifically designed to assist youth in decision making.

One part of this research is to evaluate the proposed model in a few dimensions as listed in the review form. You will see the review questions give you ample opportunity to use your expertise, experiences, interests and creativity. It would be greatly appreciated if you could complete this evaluation form.

The information supplied will be treated as confidential and will be used for research purposes which may be reported anonymously in academic publications.

Please feel free to contact me by email (norfiza.ibrahim@yahoo.com) in regards to any queries or my supervisor shuhada@uum.edu.my.

Thank you for your time and assistance.

**Introduction:**
Personal decision aids (PDA) found to be very helpful in making everyday decisions. There are various areas which can be assisted by the existing decision aids in the market. Most of the literatures show a list of options or alternatives provided by the decision aids are based on the list provided by the user only. However, the list does not necessarily correspond to a person's individual personality. Therefore, the type of personality and intelligence level of a person must be assessed prior to giving them a list of suitable alternatives for decision-making process. This on-going study related to design model development which specific to youth in assisting them making study and career decisions. Studies show that there is lack of decision aid provided specifically for youth that combines personal personality along with the type of multiple intelligences in the decision-making process. For that reason, this study focuses on the intelligent aspects in the development of intelligent decision aid application. The aid apparently integrates Personality Traits (PT) and Multiple Intelligence data in development of a computerized personal decision aid for youth named as Youth Personal Decision Aid (YouthPDA). Therefore, this study aims at development of precise design model of intelligent YouthPDA as guidance before a helpful decision aid will be utilized. The design model would include decision making techniques, criteria and conceptual design model.

**Objective of expert review:**
To conduct expert review of the proposed YouthPDA and its components.

| Document No. 02 | **Design Model of YouthPDA**<br>School of Multimedia Technology and Communication<br>UUM College of Arts and Sciences<br>Universiti Utara Malaysia (UUM) |
|---|---|

## YOUTH PERSONAL DECISION MAKING PROCESS

**Intelligence**

### PROBLEM IDENTIFICATION

Personality Trait Test → Multiple Intelligence Test

1. Setup user profiling
2. Store accepted threshold
3. Normalize user profile

**Design**

### STEPS

- 1. Extract user information
- 2. Calculate decision.

**Choice**

### OPTIONS

- Display recommendations

Agree?

Yes → Update database

No → Re-evaluate threshold

Note:
** - Compulsory
* - Recommended

## DESIGN MODEL COMPONENTS**

**CRITERIA****
- ✓ Personality style
- ✓ Intelligence level

**TECHNIQUE****
- ✓ Rule-based Reasoning

**THEORY****
- ✓ Personality Traits
- ✓ Multiple Intelligence
- ✓ Descriptive
- ✓ Normative
- ✓ Prescriptive
- ✓ Behavioural Decision
- ✓ Cognitive Psychology
- ✓ Utility
- ✓ Preference
- ✓ Dominance

**EMBEDDED**

## HCI COMPONENTS

1. USER INTERFACE DESIGN PRINCIPLES
   - User familiarity**
   - Consistency**
   - Minimal surprise**
   - User guidance**
2. GRAPHIC DESIGN PRINCIPLES
   - Metaphor**
   - Clarity**
   - Consistency**
   - Alignment**
3. INTERACTION STYLES
   - Menu**
   - Object manipulation*
   - Form fills*
   - Pull-down*
   - Point & Click**
4. DESIGN ELEMENTS
   - Text**
   - Colours**
   - Images*
   - Icons**
   - Charts**

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**Instructions:**
Please read and go through the given YouthPDA conceptual design model figure (Document No. 2). With your qualification and expertise, please provide feedback on the listed items.

## EXPERT/REVIEWER DETAILS

Name            : _____ *

Age             : _____ *

Gender          : Male [　]　　Female [　]

Affiliation     : _____ *

Working experience : _____ years *

Position        : _____ *

(* compulsory)

## ITEMS FOR REVIEW

Based on the proposed design model (as depicted in the given hand-out), please tick
(✓) your choice.

| 1.　MAIN COMPONENTS | Needs very detail explanations | Need some explanations | Is easy to understand |
|---|---|---|---|
| Intelligence | | | |
| Design | | | |
| Choice | | | |

| 2.　PROCESS IN EACH OF COMPONENTS | Needs very detail explanations | Need some explanations | Is easy to understand |
|---|---|---|---|
| Intelligence *(Problem Identification)* | | | |
| Set up user profiling | | | |
| Store accepted threshold | | | |
| Normalize user profile | | | |
| Design | | | |
| Extract user information | | | |
| Calculate decision | | | |
| Choice | | | |
| Update database | | | |
| Re-evaluate threshold | | | |

| 3. THE PROPOSED ELEMENTS IN THE *DESIGN MODEL COMPONENTS* | Some are definitely not relevant | Some may be not relevant | All are relevant |
|---|---|---|---|
| Technique | | | |
| Criteria | | | |
| Theory | | | |

| 4. THE PROPOSED HCI COMPONENTS IN THE *DESIGN MODEL COMPONENTS* | Some are definitely not relevant | Some may be not relevant | All are relevant |
|---|---|---|---|
| User Interface Design Principles | | | |
| Graphic Design Principles | | | |
| Interaction Styles | | | |
| Design Elements | | | |

**Please provide answers to these questions**

5. The connections and flows of all the elements are logical.

  **[Yes/No]**

6. The model is usable to the development of Youth Personal Decision Aid.

  **[Yes/No]**

7. Overall, the design model is practicable.

  **[Yes/No]**

8. What is still lacking in the model (to make it more comprehensive)?

_____

_____

_____

_____

9. Please write your further comments/recommendations below:

_____

_____

_____

_____

**Thank you for your cooperation**

# APPENDIX F

## Coding for Determining Career Recommendations

```
/*CAREER MULTIPLE INTELLIGENT TEST
*/
package youthpda;

import java.awt.Dimension;
import java.awt.DisplayMode;
import java.awt.GraphicsDevice;
import java.awt.Toolkit;
import java.awt.Window;
import javax.swing.JFrame;
import javax.swing.JOptionPane;
//right click for layout and sett null layout in order to put label
as a background, so that it will be settled as a background

public class IUCareerMITest extends javax.swing.JInternalFrame {

    AdoDBMultipleINtelligentTest db;
    Imainform dataMain;
    TbQMultipleIntelligence tb ;
    Integer kode = 1;
    Integer StartCode = 0;
    Integer EditCode = 1;
    String username = null;
    Boolean editStatus = false;
    private Integer pilih;
    private Integer SPMdomnt;
    /**
     * Creates new form TFUserMultipleIntelligenceTest*/
      /**
     * Creates new form UIMain */

    public void refresh()
    {   //First View of Questionnaire
        db.refreshCount();
        kode = 1;
        setVIew(kode);
        String kodedata = Integer.toString(kode);
        kodeText.setText(kodedata+"/10");
         NextButton.setText("Next");
        NextButton.setEnabled(true);
        backButton.setEnabled(false);
    }
    public IUCareerMITest() {
        initComponents();
    }
     public IUCareerMITest(Imainform main, Dimension dm,String
user,Boolean status,Integer Pilihan,Integer SPM) {

        //check if already take a test or not
        initComponents();
        db = new AdoDBMultipleINtelligentTest();
        this.refresh();
        dataMain = main;
        username = user;
        //set username
        name.setText(username);
        //Status Edit Test;
        pilih = Pilihan;
        editStatus = status;
        SPMdomnt = SPM;
```

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```java
        //middle screen
        Dimension jInternalFrameSize = this.getSize();
        this.setLocation((dm.width - jInternalFrameSize.width)/2,
        (dm.height- jInternalFrameSize.height)/2);
    }
        //This procedure is settled in order to show towards user what
questions that is being shown
        public void setVIew(Integer kode)
        {  //setting questions list
            db.questions_classifier(kode);

            StartCode = Integer.parseInt(db.getCode1());
            System.out.println("Startcode = "+StartCode);
            Integer EndCode = StartCode+7;
            int i = 0;
            EditCode = StartCode;
            while(StartCode <= EndCode)
        {
            db.getDataFromTable(StartCode);
            tb = db.getDataFromTable(StartCode);
            Integer selectedStatus = tb.getCount();
            Boolean check = false;
            if(selectedStatus == 1)
            {
                check = true;
            }
            if(i == 0)
            {
                Text1.setText(tb.getQuestion());
                Text1.setSelected(check);
            }
            else if(i == 1)
            {
                Text2.setText(tb.getQuestion());
                Text2.setSelected(check);
            }
            else if(i == 2)
            {
                Text3.setText(tb.getQuestion());
                Text3.setSelected(check);
            }
            else if(i == 3)
            {
                Text4.setText(tb.getQuestion());
                Text4.setSelected(check);
            }
            else if(i == 4)
            {
                Text5.setText(tb.getQuestion());
                Text5.setSelected(check);
            }
            else if(i == 5)
            {
                Text6.setText(tb.getQuestion());
                Text6.setSelected(check);
            }
            else if(i == 6)
            {
                Text7.setText(tb.getQuestion());
                Text7.setSelected(check);
            }
```

```
            else if(i == 7)
            {
                Text8.setText(tb.getQuestion());
                Text8.setSelected(check);
            }
            i++;
            StartCode++;
        }
    }
    /**
     * This method is called from within the constructor to
initialize the form.*/
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated
Code">//GEN-BEGIN:initComponents
    private void initComponents() {

        jButton1 = new javax.swing.JButton();
        jPanel1 = new javax.swing.JPanel();
        jLabel3 = new javax.swing.JLabel();
        jLabel15 = new javax.swing.JLabel();
        Text2 = new javax.swing.JCheckBox();
        Text1 = new javax.swing.JCheckBox();
        Text3 = new javax.swing.JCheckBox();
        Text4 = new javax.swing.JCheckBox();
        Text5 = new javax.swing.JCheckBox();
        Text6 = new javax.swing.JCheckBox();
        Text7 = new javax.swing.JCheckBox();
        jLabel16 = new javax.swing.JLabel();
        jSeparator1 = new javax.swing.JSeparator();
        kodeText = new javax.swing.JLabel();
        Text8 = new javax.swing.JCheckBox();
        name1 = new javax.swing.JLabel();
        name = new javax.swing.JLabel();
        backButton = new javax.swing.JButton();
        NextButton = new javax.swing.JButton();
        refresh = new javax.swing.JButton();
        jLabel4 = new javax.swing.JLabel();

        setBorder(new
javax.swing.border.SoftBevelBorder(javax.swing.border.BevelBorder.RA
ISED));
        setClosable(true);
        setForeground(new java.awt.Color(51, 51, 0));
        setTitle("Multiple Intelligence Test");
        addInternalFrameListener(new
javax.swing.event.InternalFrameListener() {
            public void
internalFrameActivated(javax.swing.event.InternalFrameEvent evt) {
            }
            public void
internalFrameClosed(javax.swing.event.InternalFrameEvent evt) {
                formInternalFrameClosed(evt);
            }
            public void
internalFrameClosing(javax.swing.event.InternalFrameEvent evt) {
            }
            public void
internalFrameDeactivated(javax.swing.event.InternalFrameEvent evt) {
            }
```

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```java
            public void
internalFrameDeiconified(javax.swing.event.InternalFrameEvent evt) {
            }
            public void
internalFrameIconified(javax.swing.event.InternalFrameEvent evt) {
            }
            public void
internalFrameOpened(javax.swing.event.InternalFrameEvent evt) {
            }
        });
        getContentPane().setLayout(new
org.netbeans.lib.awtextra.AbsoluteLayout());

        jButton1.setFont(new java.awt.Font("Calibri", 1, 12)); //
NOI18N
        jButton1.setText("BACK");
        jButton1.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent
evt) {
                jButton1ActionPerformed(evt);
            }
        });
        getContentPane().add(jButton1, new
org.netbeans.lib.awtextra.AbsoluteConstraints(1070, 550, -1, -1));

        jPanel1.setBackground(new java.awt.Color(255, 255, 255));

jPanel1.setBorder(javax.swing.BorderFactory.createEtchedBorder());
        jPanel1.setForeground(new java.awt.Color(0, 0, 204));

        jLabel3.setFont(new java.awt.Font("Calibri", 1, 24)); //
NOI18N
        jLabel3.setForeground(new java.awt.Color(51, 51, 255));
        jLabel3.setText("I like to");

        jLabel15.setFont(new java.awt.Font("Calibri", 0, 14)); //
NOI18N
        jLabel15.setText("Select one or more responses from the list
below: ");

        Text2.setBackground(new java.awt.Color(255, 255, 255));
        Text2.setFont(new java.awt.Font("Calibri", 0, 14)); //
NOI18N
        Text2.setText("Draw and create");
        Text2.addMouseListener(new java.awt.event.MouseAdapter() {
            public void mouseReleased(java.awt.event.MouseEvent evt)
{
                Text2MouseReleased(evt);
            }
        });
        Text1.setBackground(new java.awt.Color(255, 255, 255));
        Text1.setFont(new java.awt.Font("Calibri", 0, 14)); //
NOI18N
        Text1.setText("text1 ");
        Text1.addMouseListener(new java.awt.event.MouseAdapter() {
            public void mouseReleased(java.awt.event.MouseEvent evt)
{
                Text1MouseReleased(evt);
            }
        });
```

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```java
        Text3.setBackground(new java.awt.Color(255, 255, 255));
        Text3.setFont(new java.awt.Font("Calibri", 0, 14)); //
NOI18N
        Text3.setText("Collect things such as rocks");
        Text3.addMouseListener(new java.awt.event.MouseAdapter() {
            public void mouseReleased(java.awt.event.MouseEvent evt)
{
                Text3MouseReleased(evt);
            }
        });
        Text4.setBackground(new java.awt.Color(255, 255, 255));
        Text4.setFont(new java.awt.Font("Calibri", 0, 14)); //
NOI18N
        Text4.setText("Sing");
        Text4.addMouseListener(new java.awt.event.MouseAdapter() {
            public void mouseReleased(java.awt.event.MouseEvent evt)
{
                Text4MouseReleased(evt);
            }
        });
        Text5.setBackground(new java.awt.Color(255, 255, 255));
        Text5.setFont(new java.awt.Font("Calibri", 0, 14)); //
NOI18N
        Text5.setText("Touch object when looking at them");
        Text5.addMouseListener(new java.awt.event.MouseAdapter() {
            public void mouseReleased(java.awt.event.MouseEvent evt)
{
                Text5MouseReleased(evt);
            }
        });
        Text6.setBackground(new java.awt.Color(255, 255, 255));
        Text6.setFont(new java.awt.Font("Calibri", 0, 14)); //
NOI18N
        Text6.setText("Teach others");
        Text6.addMouseListener(new java.awt.event.MouseAdapter() {
            public void mouseReleased(java.awt.event.MouseEvent evt)
{
                Text6MouseReleased(evt);
            }
        });

        Text7.setBackground(new java.awt.Color(255, 255, 255));
        Text7.setFont(new java.awt.Font("Calibri", 0, 14)); //
NOI18N
        Text7.setText("Keep a diary");
        Text7.addMouseListener(new java.awt.event.MouseAdapter() {
            public void mouseReleased(java.awt.event.MouseEvent evt)
{
                Text7MouseReleased(evt);
            }
        });
        jLabel16.setFont(new java.awt.Font("Calibri", 1, 24)); //
NOI18N
        jLabel16.setText("Question Part");

        kodeText.setFont(new java.awt.Font("Calibri", 1, 24)); //
NOI18N
        kodeText.setText("jLabel4");

        Text8.setBackground(new java.awt.Color(255, 255, 255));
```

```java
        Text8.setFont(new java.awt.Font("Calibri", 0, 14)); //
NOI18N
        Text8.setText("Keep a diary");
        Text8.addMouseListener(new java.awt.event.MouseAdapter() {
            public void mouseReleased(java.awt.event.MouseEvent evt)
{
                Text8MouseReleased(evt);
            }
        });
        name1.setFont(new java.awt.Font("Calibri", 1, 14)); //
NOI18N
        name1.setForeground(new java.awt.Color(0, 0, 153));
        name1.setText("Username :");

        name.setFont(new java.awt.Font("Calibri", 1, 14)); // NOI18N
        name.setForeground(new java.awt.Color(0, 0, 153));
        name.setText("jLabel35");

        org.jdesktop.layout.GroupLayout jPanel1Layout = new
org.jdesktop.layout.GroupLayout(jPanel1);
        jPanel1.setLayout(jPanel1Layout);
        jPanel1Layout.setHorizontalGroup(

jPanel1Layout.createParallelGroup(org.jdesktop.layout.GroupLayout.LE
ADING)
            .add(jPanel1Layout.createSequentialGroup()
                .addContainerGap()

.add(jPanel1Layout.createParallelGroup(org.jdesktop.layout.GroupLayo
ut.LEADING)
                    .add(jLabel15)
                    .add(jPanel1Layout.createSequentialGroup()
                        .add(216, 216, 216)
                        .add(jLabel16)

.addPreferredGap(org.jdesktop.layout.LayoutStyle.RELATED)
                        .add(kodeText))
                    .add(jPanel1Layout.createSequentialGroup()
                        .add(jLabel3)
                        .add(132, 132, 132)
                        .add(jSeparator1,
org.jdesktop.layout.GroupLayout.PREFERRED_SIZE, 249,
org.jdesktop.layout.GroupLayout.PREFERRED_SIZE))
                    .add(0, 212, Short.MAX_VALUE))
                .add(jPanel1Layout.createSequentialGroup()

.add(jPanel1Layout.createParallelGroup(org.jdesktop.layout.GroupLayo
ut.LEADING)
                    .add(jPanel1Layout.createSequentialGroup()
                        .add(31, 31, 31)

.add(jPanel1Layout.createParallelGroup(org.jdesktop.layout.GroupLayo
ut.LEADING)

.add(jPanel1Layout.createParallelGroup(org.jdesktop.layout.GroupLayo
ut.TRAILING, false)

.add(org.jdesktop.layout.GroupLayout.LEADING, Text2,
org.jdesktop.layout.GroupLayout.DEFAULT_SIZE, 594, Short.MAX_VALUE)

.add(org.jdesktop.layout.GroupLayout.LEADING, Text1,
```

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```java
org.jdesktop.layout.GroupLayout.DEFAULT_SIZE,
org.jdesktop.layout.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))

.add(jPanel1Layout.createParallelGroup(org.jdesktop.layout.GroupLayo
ut.TRAILING, false)

.add(org.jdesktop.layout.GroupLayout.LEADING, Text7,
org.jdesktop.layout.GroupLayout.DEFAULT_SIZE,
org.jdesktop.layout.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

.add(org.jdesktop.layout.GroupLayout.LEADING, Text6,
org.jdesktop.layout.GroupLayout.DEFAULT_SIZE,
org.jdesktop.layout.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

.add(org.jdesktop.layout.GroupLayout.LEADING, Text8,
org.jdesktop.layout.GroupLayout.DEFAULT_SIZE, 566, Short.MAX_VALUE))

.add(jPanel1Layout.createParallelGroup(org.jdesktop.layout.GroupLayo
ut.TRAILING, false)

.add(org.jdesktop.layout.GroupLayout.LEADING, Text5,
org.jdesktop.layout.GroupLayout.DEFAULT_SIZE, 570, Short.MAX_VALUE)

.add(org.jdesktop.layout.GroupLayout.LEADING, Text3,
org.jdesktop.layout.GroupLayout.DEFAULT_SIZE,
org.jdesktop.layout.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)

.add(org.jdesktop.layout.GroupLayout.LEADING, Text4,
org.jdesktop.layout.GroupLayout.DEFAULT_SIZE,
org.jdesktop.layout.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))))
                    .add(jPanel1Layout.createSequentialGroup()
                        .addContainerGap()
                        .add(name1,
org.jdesktop.layout.GroupLayout.PREFERRED_SIZE, 73,
org.jdesktop.layout.GroupLayout.PREFERRED_SIZE)

.addPreferredGap(org.jdesktop.layout.LayoutStyle.RELATED)
                        .add(name,
org.jdesktop.layout.GroupLayout.PREFERRED_SIZE, 130,
org.jdesktop.layout.GroupLayout.PREFERRED_SIZE)))

.addContainerGap(org.jdesktop.layout.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE))
        );
        jPanel1Layout.setVerticalGroup(

jPanel1Layout.createParallelGroup(org.jdesktop.layout.GroupLayout.LE
ADING)
            .add(jPanel1Layout.createSequentialGroup()

.add(jPanel1Layout.createParallelGroup(org.jdesktop.layout.GroupLayo
ut.BASELINE)
                    .add(name)
                    .add(name1))

.addPreferredGap(org.jdesktop.layout.LayoutStyle.RELATED)

.add(jPanel1Layout.createParallelGroup(org.jdesktop.layout.GroupLayo
ut.BASELINE)
                    .add(kodeText)
                    .add(jLabel16))
```

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```
                .addPreferredGap(org.jdesktop.layout.LayoutStyle.RELATED)

                .add(jPanel1Layout.createParallelGroup(org.jdesktop.layout.GroupLayo
ut.LEADING)
                        .add(jPanel1Layout.createSequentialGroup()
                            .add(jSeparator1,
org.jdesktop.layout.GroupLayout.PREFERRED_SIZE, 13,
org.jdesktop.layout.GroupLayout.PREFERRED_SIZE)
                            .add(35, 35, 35)
                            .add(jLabel15)
                            .add(18, 18, 18)
                            .add(Text1)

.addPreferredGap(org.jdesktop.layout.LayoutStyle.UNRELATED)
                            .add(Text2)

.addPreferredGap(org.jdesktop.layout.LayoutStyle.RELATED)
                            .add(Text3)

.addPreferredGap(org.jdesktop.layout.LayoutStyle.RELATED)
                            .add(Text4))
                        .add(jLabel3))

.addPreferredGap(org.jdesktop.layout.LayoutStyle.RELATED)
                    .add(Text5)

.addPreferredGap(org.jdesktop.layout.LayoutStyle.RELATED)
                    .add(Text6)

.addPreferredGap(org.jdesktop.layout.LayoutStyle.RELATED)
                    .add(Text7)

.addPreferredGap(org.jdesktop.layout.LayoutStyle.RELATED,
org.jdesktop.layout.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                    .add(Text8)
                    .addContainerGap())
            );
        getContentPane().add(jPanel1, new
org.netbeans.lib.awtextra.AbsoluteConstraints(110, 120, 680, -1));

        backButton.setFont(new java.awt.Font("Calibri", 1, 24)); //
NOI18N
        backButton.setText("Back");
        backButton.setEnabled(false);
        backButton.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent
evt) {
                backButtonActionPerformed(evt);
            }
        });
        getContentPane().add(backButton, new
org.netbeans.lib.awtextra.AbsoluteConstraints(280, 480, 117, 61));

        NextButton.setFont(new java.awt.Font("Calibri", 1, 24)); //
NOI18N
        NextButton.setText("Next");
        NextButton.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent
evt) {
```

```
                    NextButtonActionPerformed(evt);
            }
        });
        getContentPane().add(NextButton, new
org.netbeans.lib.awtextra.AbsoluteConstraints(410, 480, 129, 61));

        refresh.setFont(new java.awt.Font("Calibri", 1, 24)); //
NOI18N
        refresh.setText("Restart");
        refresh.addActionListener(new
java.awt.event.ActionListener() {
            public void actionPerformed(java.awt.event.ActionEvent
evt) {
                refreshActionPerformed(evt);
            }
        });
        getContentPane().add(refresh, new
org.netbeans.lib.awtextra.AbsoluteConstraints(550, 480, 143, 61));

        jLabel4.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/youthpda/image/MIBack
Gr2.jpg"))); // NOI18N
        getContentPane().add(jLabel4, new
org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, 1140, 580));

        pack();
    }// </editor-fold>//GEN-END:initComponents

    private void
NextButtonActionPerformed(java.awt.event.ActionEvent evt) {//GEN-
FIRST:event_NextButtonActionPerformed
        // TODO add your handling code here:
        String newLine = System.getProperty("line.separator");
        if(NextButton.getText()=="Finish")
        {
            int result = db.calTheRow();
            if(result < 10)
            {
                JOptionPane.showInternalMessageDialog(this,"Please
select at least 10 statements"+newLine+"to describe you as a
learner","WARNING MESSAGE",JOptionPane.OK_OPTION);
            }
            else
            {
                int dialog = JOptionPane.YES_NO_OPTION;
             int confirm;

            confirm = JOptionPane.showInternalConfirmDialog(this,
"Want to process?", "Confirmation Message", dialog);
            if(confirm == 0)
            {
             setVIew(kode);
             //Before calculation// check how many checklist

             //calculate the Multiple test
             //here data(s) are calculated and saved
             db.calculateResult(username,editStatus);
             //get data n send to jFrame result
```

```java
                JOptionPane.showInternalMessageDialog(this, "Thanks for
accomplish this questionaire"+newLine+"Press (OK) to continue",
"INFORMATION MESSAGE", JOptionPane.INFORMATION_MESSAGE);
                if(dialog == 0)
                {
                    System.out.println("Pilihan mu adaalah  = "+pilih );
                        db.refreshCount();
                        //Pilihan merupakan saringan antara study and
career back to requisite userInterface
                    this.dispose();
                }
            //refresh back the values inside Multiple Intelligences
                db.refreshMV();
                refresh();
                }
                }
        }
        else
        {
            kode++;
            setVIew(kode);
            if (kode==0)
            {
                backButton.setEnabled(false);
            }
            else if(kode>0 && kode<11)
            {
                backButton.setEnabled(true);
            }
            if(kode==10){
                NextButton.setText("Finish");
            }
            String kodedata = Integer.toString(kode);

            kodeText.setText(kodedata+"/10");
        }
    }//GEN-LAST:event_NextButtonActionPerformed

    private void
backButtonActionPerformed(java.awt.event.ActionEvent evt) {//GEN-
FIRST:event_backButtonActionPerformed
        // TODO add your handling code here:
        NextButton.setText("Next");
        kode--;
        setVIew(kode);
        if(kode==1)
        {
            backButton.setEnabled(false);
            kode = 1;
        }
        if (kode < 10)
        {
            NextButton.setEnabled(true);
        }
        String kodedata = Integer.toString(kode);
        kodeText.setText(kodedata+"/10");

    }//GEN-LAST:event_backButtonActionPerformed

    private void refreshActionPerformed(java.awt.event.ActionEvent
evt) {//GEN-FIRST:event_refreshActionPerformed
```

```java
        // TODO add your handling code here:
        int dialog = JOptionPane.YES_NO_CANCEL_OPTION;
        int choice = JOptionPane.showInternalConfirmDialog(this,
"Restart the system?", "WARNING MESSAGE",dialog);
        if(choice == 0)
        {
            refresh();
        }
    }//GEN-LAST:event_refreshActionPerformed

    private void
formInternalFrameClosed(javax.swing.event.InternalFrameEvent evt)
{//GEN-FIRST:event_formInternalFrameClosed
        // TODO add your handling code here:
        db.refreshCount();
            if(pilih == 0)
                {
dataMain.callRequisteInterface(name.getText());
                }
                else if(pilih == 1)
                {
                    //dataMain.callIUrequisiteSPM(SPMdomnt,
name.getText());
                }
    }//GEN-LAST:event_formInternalFrameClosed

    private void Text2MouseReleased(java.awt.event.MouseEvent evt)
{//GEN-FIRST:event_Text2MouseReleased
        // TODO add your handling code here:
        if (Text2.isSelected() == true)
        {
            db.edit_data(EditCode+1, true);
        }
        else
        {
            db.edit_data(EditCode+1, false);
        }
    }//GEN-LAST:event_Text2MouseReleased

    private void Text3MouseReleased(java.awt.event.MouseEvent evt)
{//GEN-FIRST:event_Text3MouseReleased
        // TODO add your handling code here:
        if (Text3.isSelected() == true)
        {
            db.edit_data(EditCode+2, true);
        }
        else
        {
            db.edit_data(EditCode+2, false);
        }
    }//GEN-LAST:event_Text3MouseReleased

    private void Text4MouseReleased(java.awt.event.MouseEvent evt)
{//GEN-FIRST:event_Text4MouseReleased
        // TODO add your handling code here:
        if (Text4.isSelected() == true)
        {
            db.edit_data(EditCode+3, true);
        }
        else
        {
```

```java
            db.edit_data(EditCode+3, false);
        }
    }//GEN-LAST:event_Text4MouseReleased

    private void Text5MouseReleased(java.awt.event.MouseEvent evt)
{//GEN-FIRST:event_Text5MouseReleased
        // TODO add your handling code here:
            if (Text5.isSelected() == true)
        {
            db.edit_data(EditCode+4, true);
        }
        else
        {
            db.edit_data(EditCode+4, false);
        }
    }//GEN-LAST:event_Text5MouseReleased

    private void Text6MouseReleased(java.awt.event.MouseEvent evt)
{//GEN-FIRST:event_Text6MouseReleased
        // TODO add your handling code here:
         if (Text6.isSelected() == true)
        {
            db.edit_data(EditCode+5, true);
        }
        else
        {
            db.edit_data(EditCode+5, false);
        }
    }//GEN-LAST:event_Text6MouseReleased

    private void Text7MouseReleased(java.awt.event.MouseEvent evt)
{//GEN-FIRST:event_Text7MouseReleased
        // TODO add your handling code here:
          if (Text7.isSelected() == true)
        {
            db.edit_data(EditCode+6, true);
        }
        else
        {
            db.edit_data(EditCode+6, false);
        }
    }//GEN-LAST:event_Text7MouseReleased

    private void Text1MouseReleased(java.awt.event.MouseEvent evt)
{//GEN-FIRST:event_Text1MouseReleased
        // TODO add your handling code here:
         if (Text1.isSelected()==true)
        {
            db.edit_data(EditCode, true);
            System.out.println("TRUE");
        }
        else
        {
            db.edit_data(EditCode, false);
            System.out.println("FALSE");
        }
    }//GEN-LAST:event_Text1MouseReleased

    private void Text8MouseReleased(java.awt.event.MouseEvent evt)
{//GEN-FIRST:event_Text8MouseReleased
        // TODO add your handling code here:
```

```java
        if (Text8.isSelected()==true)
        {
            db.edit_data(EditCode+7, true);
            System.out.println("TRUE");
        }
        else
        {
            db.edit_data(EditCode+7, false);
            System.out.println("FALSE");
        }
    }//GEN-LAST:event_Text8MouseReleased

    private void jButton1ActionPerformed(java.awt.event.ActionEvent
evt) {//GEN-FIRST:event_jButton1ActionPerformed
        // TODO add your handling code here:
         db.refreshCount();
            if(pilih == 0)
                {
dataMain.callRequisteInterface(name.getText());
                }
                else if(pilih == 1)
                {
                 //   dataMain.callIUrequisiteSPM(SPMdomnt,
name.getText());
                }
            this.hide();
    }//GEN-LAST:event_jButton1ActionPerformed

// Variables declaration - do not modify//GEN-BEGIN:variables
    private javax.swing.JButton NextButton;
    private javax.swing.JCheckBox Text1;
    private javax.swing.JCheckBox Text2;
    private javax.swing.JCheckBox Text3;
    private javax.swing.JCheckBox Text4;
    private javax.swing.JCheckBox Text5;
    private javax.swing.JCheckBox Text6;
    private javax.swing.JCheckBox Text7;
    private javax.swing.JCheckBox Text8;
    private javax.swing.JButton backButton;
    private javax.swing.JButton jButton1;
    private javax.swing.JLabel jLabel15;
    private javax.swing.JLabel jLabel16;
    private javax.swing.JLabel jLabel3;
    private javax.swing.JLabel jLabel4;
    private javax.swing.JPanel jPanel1;
    private javax.swing.JSeparator jSeparator1;
    private javax.swing.JLabel kodeText;
    private javax.swing.JLabel name;
    private javax.swing.JLabel name1;
    private javax.swing.JButton refresh;
    // End of variables declaration//GEN-END:variables
}
```

```java
/*CAREER RESULTS
 */
package youthpda;

import java.awt.AWTException;
import java.awt.Dimension;
import java.awt.Rectangle;
import java.awt.Robot;
import java.awt.Toolkit;
import java.awt.image.BufferedImage;
import java.io.File;
import java.io.IOException;
import javax.imageio.ImageIO;
import javax.swing.JFileChooser;
import javax.swing.JOptionPane;

public class IUCareerResults extends javax.swing.JInternalFrame {

    Integer M1,M2,M3,M4,M5,M6,M7,M8;
    private AdoDBMultipleINtelligentTest dbMul;
    private AdoDBPersonality2 dbPer;
    private String user;
    private TbMultipleIntelligence tb;
    private Imainform TF;

    /**Creates new form TestAja */
    public IUCareerResults() {
        initComponents();
    }
    public IUCareerResults(String username,Dimension dm, Imainform
main) {
        initComponents();

        dbMul = new AdoDBMultipleINtelligentTest();
        user = username;
        TbMultipleUSer tbnya = dbMul.getDataMIUser(username);
        TF = main;
      /*
        M1 = tbnya.getlinguistic();
        M2 = tbnya.getlogic();
        M3 = tbnya.getmusical();
        M4 = tbnya.getbody();
        M5 = tbnya.getspacial();
        M6 = tbnya.getinterpersonal();
        M7 = tbnya.getintrapersonal();
        M8 = tbnya.getnaturalistic();
        */
        dbPer = new AdoDBPersonality2();

        // String descriptionString =
        String newLine = System.getProperty("line.separator");
        //get type of username BASED ON PERSONALITY OF USER
        String type = dbPer.getTypeOfUser(username);
        //get description from table PERSONALITY2
        String desc = dbPer.getDescriptionOfType(type);
        System.out.println("Ini the highest for Personality2 careers
= "+desc);
        //Split the string
        String s = desc;
        String words[] = s.split(" ");
        //Setting the career (The most Prominant)
```

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```java
        c1.setText(words[0]);
        c2.setText(words[1]);
        c3.setText(words[2]);
        c4.setText(words[3]);
        c5.setText(words[4]);
        c6.setText(words[5]);


  //setting the second rank (based on multiple intelligent)
  //in getColoumnName function the highest/the greatest MI is selected
        String highestMI = dbMul.getColoumName(username);
  //in here the complete descriptions are taken here... for example
  the highest was logic, So that in getCareerTbCareer The explanation
  will be captured
        String careerMI = dbMul.getCareerTbCareer(highestMI);
        String cMI = careerMI;
        System.out.println("Ini the second highers for MI careers = 
  "+cMI);
        String wordsMI[] = cMI.split(" ");

        d1.setText(wordsMI[0]);
        d2.setText(wordsMI[1]);
        d3.setText(wordsMI[2]);
        d4.setText(wordsMI[3]);
        d5.setText(wordsMI[4]);
        d6.setText(wordsMI[5]);

        //for the "f" data;
        //This from the continuing Personality of user from
  TB_PERSONALITY_CAREER (Personality Types)
        TbQPersonalityDetails tbPD =
  dbPer.getPersonalityDetails(username);
        String careers = tbPD.getCareer();
        String cMI2 = careers;
        System.out.println(careers);
        String wordsPT2[] = cMI2.split(" ");
        f1.setText(wordsPT2[0]);
        f2.setText(wordsPT2[1]);
        f3.setText(wordsPT2[2]);
        f4.setText(wordsPT2[3]);
        f5.setText(wordsPT2[4]);
        f6.setText(wordsPT2[5]);

        f7.setText(wordsPT2[6]);
        f8.setText(wordsPT2[7]);
        f9.setText(wordsPT2[8]);

        f10.setText(wordsPT2[9]);
        f11.setText(wordsPT2[10]);
        f12.setText(wordsPT2[11]);

        System.out.println(careers);

        TbQPersonalityDetails tbPD2 =
  dbPer.getPersonalityDetails2();
        String careers2 = tbPD2.getCareer();
        String cMI3 = careers2;
        String wordsPT3[] = cMI3.split(" ");

        f13.setText(wordsPT2[12]);
        f14.setText(wordsPT2[13]);
        f15.setText(wordsPT2[14]);
```

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```java
        f16.setText(wordsPT2[15]);
        f17.setText(wordsPT2[16]);
        f18.setText(wordsPT2[17]);
        f19.setText(wordsPT2[18]);
        f20.setText(wordsPT2[19]);
        f21.setText(wordsPT2[20]);
        f22.setText(wordsPT2[21]);
        f23.setText(wordsPT2[22]);
        f24.setText(wordsPT2[23]);

        f25.setText(wordsPT2[24]);
        f26.setText(wordsPT2[25]);
        f27.setText(wordsPT2[26]);
        f28.setText(wordsPT2[27]);
        f29.setText(wordsPT2[28]);
        f30.setText(wordsPT2[29]);
        f31.setText(wordsPT2[30]);
        f32.setText(wordsPT2[31]);
        f33.setText(wordsPT2[32]);
        f34.setText(wordsPT2[33]);


        e1.setText(wordsPT2[34]);
        e2.setText(wordsPT2[35]);
        e3.setText(wordsPT2[36]);
        e4.setText(wordsPT2[37]);
        e5.setText(wordsPT2[38]);
        e6.setText(wordsPT2[39]);

        Dimension jFrameSize = this.getSize();
        this.setLocation((dm.width - jFrameSize.width)/2,
        (dm.height- jFrameSize.height)/2);
    }
/**
     * This method is called from within the constructor to
initialize the form.*/
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated
Code">//GEN-BEGIN:initComponents
    private void initComponents() {

        jLabel2 = new javax.swing.JLabel();
        jButton1 = new javax.swing.JButton();
        jPanel1 = new javax.swing.JPanel();
        f1 = new javax.swing.JLabel();
        f2 = new javax.swing.JLabel();
        e4 = new javax.swing.JLabel();
        d3 = new javax.swing.JLabel();
        f3 = new javax.swing.JLabel();
        f4 = new javax.swing.JLabel();
        d5 = new javax.swing.JLabel();
        f5 = new javax.swing.JLabel();
        f6 = new javax.swing.JLabel();
        e5 = new javax.swing.JLabel();
        c2 = new javax.swing.JLabel();
        f7 = new javax.swing.JLabel();
        f8 = new javax.swing.JLabel();
        f9 = new javax.swing.JLabel();
        f10 = new javax.swing.JLabel();
        f11 = new javax.swing.JLabel();
        f12 = new javax.swing.JLabel();
```

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```java
            d6 = new javax.swing.JLabel();
            f13 = new javax.swing.JLabel();
            f14 = new javax.swing.JLabel();
            f15 = new javax.swing.JLabel();
            f31 = new javax.swing.JLabel();
            c6 = new javax.swing.JLabel();
            e3 = new javax.swing.JLabel();
            f16 = new javax.swing.JLabel();
            c4 = new javax.swing.JLabel();
            f17 = new javax.swing.JLabel();
            f18 = new javax.swing.JLabel();
            f19 = new javax.swing.JLabel();
            d2 = new javax.swing.JLabel();
            f20 = new javax.swing.JLabel();
            f21 = new javax.swing.JLabel();
            c3 = new javax.swing.JLabel();
            f22 = new javax.swing.JLabel();
            f23 = new javax.swing.JLabel();
            e6 = new javax.swing.JLabel();
            f24 = new javax.swing.JLabel();
            f25 = new javax.swing.JLabel();
            e2 = new javax.swing.JLabel();
            f26 = new javax.swing.JLabel();
            f27 = new javax.swing.JLabel();
            f28 = new javax.swing.JLabel();
            c5 = new javax.swing.JLabel();
            f29 = new javax.swing.JLabel();
            f30 = new javax.swing.JLabel();
            f32 = new javax.swing.JLabel();
            d1 = new javax.swing.JLabel();
            e1 = new javax.swing.JLabel();
            c1 = new javax.swing.JLabel();
            f33 = new javax.swing.JLabel();
            f34 = new javax.swing.JLabel();
            d4 = new javax.swing.JLabel();
            background = new javax.swing.JLabel();

            setBorder(new
javax.swing.border.SoftBevelBorder(javax.swing.border.BevelBorder.RA
ISED));
            setClosable(true);
            setTitle("Career Recommedation Results");
            getContentPane().setLayout(new
org.netbeans.lib.awtextra.AbsoluteLayout());

            jLabel2.setFont(new java.awt.Font("Calibri", 0, 18)); //
NOI18N
            jLabel2.setForeground(new java.awt.Color(255, 255, 255));
            jLabel2.setText("*Note: The bigger word in tag clouds
indicates the more prominent area for your future career");
            getContentPane().add(jLabel2, new
org.netbeans.lib.awtextra.AbsoluteConstraints(10, 520, -1, -1));

            jButton1.setFont(new java.awt.Font("Calibri", 1, 14)); //
NOI18N
            jButton1.setText("Back to Main Menu");
            jButton1.addActionListener(new
java.awt.event.ActionListener() {
                public void actionPerformed(java.awt.event.ActionEvent
evt) {    jButton1ActionPerformed(evt);
                }
```

```
        });
        getContentPane().add(jButton1, new
org.netbeans.lib.awtextra.AbsoluteConstraints(750, 500, 240, 40));

        jPanel1.setBackground(new java.awt.Color(255, 255, 255));

        f1.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
        f1.setText("career");
        jPanel1.add(f1);

        f2.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
        f2.setText("career");
        jPanel1.add(f2);

        e4.setFont(new java.awt.Font("Century Gothic", 0, 18)); //
NOI18N
        e4.setText("career");
        jPanel1.add(e4);

        d3.setFont(new java.awt.Font("Century Gothic", 0, 42)); //
NOI18N
        d3.setForeground(new java.awt.Color(255, 0, 0));
        d3.setText("career");
        jPanel1.add(d3);

        f3.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
        f3.setText("career");
        jPanel1.add(f3);

        f4.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
        f4.setText("career");
        jPanel1.add(f4);

        d5.setFont(new java.awt.Font("Century Gothic", 0, 24)); //
NOI18N
        d5.setText("career");
        jPanel1.add(d5);

        f5.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
        f5.setText("career");
        jPanel1.add(f5);

        f6.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
        f6.setText("career");
        jPanel1.add(f6);

        e5.setFont(new java.awt.Font("Century Gothic", 0, 18)); //
NOI18N
        e5.setText("career");
        jPanel1.add(e5);

        c2.setFont(new java.awt.Font("Century Gothic", 0, 40)); //
NOI18N
        c2.setForeground(new java.awt.Color(255, 0, 0));
        c2.setText("career");
```

```java
        jPanel1.add(c2);

        f7.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
        f7.setText("career");
        jPanel1.add(f7);

        f8.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
        f8.setText("career");
        jPanel1.add(f8);

        f9.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
        f9.setText("career");
        jPanel1.add(f9);

        f10.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
        f10.setText("career");
        jPanel1.add(f10);

        f11.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
        f11.setText("career");
        jPanel1.add(f11);

        f12.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
        f12.setText("career");
        jPanel1.add(f12);

        d6.setFont(new java.awt.Font("Century Gothic", 0, 24)); //
        d6.setText("career");
        jPanel1.add(d6);

        f13.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
        f13.setText("career");
        jPanel1.add(f13);

        f14.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
        f14.setText("career");
        jPanel1.add(f14);

        f15.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
        f15.setText("career");
        jPanel1.add(f15);

        f31.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
        f31.setText("career");
        jPanel1.add(f31);

        c6.setFont(new java.awt.Font("Century Gothic", 0, 39)); //
        c6.setText("career");
        jPanel1.add(c6);
```

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NOI18N

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```
          e3.setFont(new java.awt.Font("Century Gothic", 0, 18)); //
NOI18N
          e3.setText("career");
          jPanel1.add(e3);

          f16.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
          f16.setText("career");
          jPanel1.add(f16);

          c4.setFont(new java.awt.Font("Century Gothic", 0, 39)); //
NOI18N
          c4.setText("career");
          jPanel1.add(c4);

          f17.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
          f17.setText("career");
          jPanel1.add(f17);

          f18.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
          f18.setText("career");
          jPanel1.add(f18);

          f19.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
          f19.setText("career");
          jPanel1.add(f19);

          d2.setFont(new java.awt.Font("Century Gothic", 0, 42)); //
NOI18N
          d2.setForeground(new java.awt.Color(255, 0, 0));
          d2.setText("career    ");
          jPanel1.add(d2);

          f20.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
          f20.setText("career");
          jPanel1.add(f20);

          f21.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
          f21.setText("career");
          jPanel1.add(f21);

          c3.setFont(new java.awt.Font("Century Gothic", 0, 24)); //
NOI18N
          c3.setText("career");
          jPanel1.add(c3);

          f22.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
          f22.setText("career");
          jPanel1.add(f22);

          f23.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
          f23.setText("career");
          jPanel1.add(f23);
```

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```
        e6.setFont(new java.awt.Font("Century Gothic", 0, 18)); //
NOI18N
        e6.setText("career");
        jPanel1.add(e6);

        f24.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
        f24.setText("career");
        jPanel1.add(f24);

        f25.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
        f25.setText("career");
        jPanel1.add(f25);

        e2.setFont(new java.awt.Font("Century Gothic", 0, 18)); //
NOI18N
        e2.setText("career");
        jPanel1.add(e2);

        f26.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
        f26.setText("career");
        jPanel1.add(f26);

        f27.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
        f27.setText("career");
        jPanel1.add(f27);

        f28.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
        f28.setText("career");
        jPanel1.add(f28);

        c5.setFont(new java.awt.Font("Century Gothic", 0, 24)); //
NOI18N
        c5.setText("career");
        jPanel1.add(c5);

        f29.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
        f29.setText("career");
        jPanel1.add(f29);

        f30.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
        f30.setText("career");
        jPanel1.add(f30);

        f32.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
        f32.setText("career");
        jPanel1.add(f32);

        d1.setFont(new java.awt.Font("Century Gothic", 0, 42)); //
NOI18N
        d1.setForeground(new java.awt.Color(255, 0, 0));
        d1.setText("career");
        jPanel1.add(d1);
```

```
        e1.setFont(new java.awt.Font("Century Gothic", 0, 18)); //
NOI18N
        e1.setText("career");
        jPanel1.add(e1);

        c1.setFont(new java.awt.Font("Century Gothic", 0, 40)); //
NOI18N
        c1.setForeground(new java.awt.Color(255, 0, 0));
        c1.setText("career");
        jPanel1.add(c1);

        f33.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
        f33.setText("career");
        jPanel1.add(f33);

        f34.setFont(new java.awt.Font("Century Gothic", 0, 11)); //
NOI18N
        f34.setText("career");
        jPanel1.add(f34);

        d4.setFont(new java.awt.Font("Century Gothic", 0, 42)); //
NOI18N
        d4.setForeground(new java.awt.Color(255, 0, 0));
        d4.setText("career");
        jPanel1.add(d4);

        getContentPane().add(jPanel1, new
org.netbeans.lib.awtextra.AbsoluteConstraints(0, 80, 990, 440));

        background.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/youthpda/image/Result
sCareer.jpg"))); // NOI18N
        getContentPane().add(background, new
org.netbeans.lib.awtextra.AbsoluteConstraints(-20, 0, 1030, 550));

        pack();
    }// </editor-fold>//GEN-END:initComponents

    private void jButton1ActionPerformed(java.awt.event.ActionEvent
evt) {//GEN-FIRST:event_jButton1ActionPerformed
        // TODO add your handling code here:
        //for screen shot the application
        /*
        //create a BufferedImage to store the screen capture.
        BufferedImage image = null;
        try {
            //Robot().createScreenCapture returns a BufferedImage
the size of the screen with Toolkit's getScreenSize().
            image = new Robot().createScreenCapture(new
Rectangle(Toolkit.getDefaultToolkit().getScreenSize()));
        }
        catch(AWTException e) {
            e.printStackTrace();
        }
//represents file to be saved.
        File file = null;
//JFileChooser used for openong save dislog in which you type the
name of your screenshot.
        JFileChooser choose = new JFileChooser();
```

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```
//pop up a save dialog in this JFrame window.
        int result = choose.showSaveDialog(this);

//JFileChooser's showSaveDialog() returns an int, and if that int
represents the static field CANCEL_OPTION, the user has pressed
cancel on the save dialog.  In this case, we simply return.
        if (result == JFileChooser.CANCEL_OPTION)
            return;

//if user types in a file name and clicks 'save' in the dialog box,
then the file typed in becomes the file to be saved.
        else
            file = choose.getSelectedFile();
        try {
//we write the file to be saved with ImageIO.write().  We supply the
image, the file type, jpg, and the file, which is 'file'.
            ImageIO.write(image, "jpg", file);
        }
        catch(IOException ioe) {
            ioe.printStackTrace();
        }
        */
        //for going back to main menu
        Integer filter = JOptionPane.showInternalConfirmDialog(this,
"back to main menu, are you sure ?!?", "QUESTION MESSAGE",
JOptionPane.YES_NO_OPTION);
        if(filter == 0)
        {
            TF.callUIInterfaceUser(user);
            this.dispose();
        }
    }//GEN-LAST:event_jButton1ActionPerformed
// Variables declaration - do not modify//GEN-BEGIN:variables
    private javax.swing.JLabel background;
    private javax.swing.JLabel c1;
    private javax.swing.JLabel c2;
    private javax.swing.JLabel c3;
    private javax.swing.JLabel c4;
    private javax.swing.JLabel c5;
    private javax.swing.JLabel c6;
    private javax.swing.JLabel d1;
    private javax.swing.JLabel d2;
    private javax.swing.JLabel d3;
    private javax.swing.JLabel d4;
    private javax.swing.JLabel d5;
    private javax.swing.JLabel d6;
    private javax.swing.JLabel e1;
    private javax.swing.JLabel e2;
    private javax.swing.JLabel e3;
    private javax.swing.JLabel e4;
    private javax.swing.JLabel e5;
    private javax.swing.JLabel e6;
    private javax.swing.JLabel f1;
    private javax.swing.JLabel f10;
    private javax.swing.JLabel f11;
    private javax.swing.JLabel f12;
    private javax.swing.JLabel f13;
    private javax.swing.JLabel f14;
    private javax.swing.JLabel f15;
    private javax.swing.JLabel f16;
    private javax.swing.JLabel f17;
```
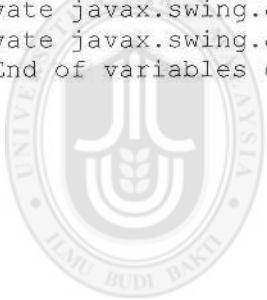
```java
    private javax.swing.JLabel f18;
    private javax.swing.JLabel f19;
    private javax.swing.JLabel f2;
    private javax.swing.JLabel f20;
    private javax.swing.JLabel f21;
    private javax.swing.JLabel f22;
    private javax.swing.JLabel f23;
    private javax.swing.JLabel f24;
    private javax.swing.JLabel f25;
    private javax.swing.JLabel f26;
    private javax.swing.JLabel f27;
    private javax.swing.JLabel f28;
    private javax.swing.JLabel f29;
    private javax.swing.JLabel f3;
    private javax.swing.JLabel f30;
    private javax.swing.JLabel f31;
    private javax.swing.JLabel f32;
    private javax.swing.JLabel f33;
    private javax.swing.JLabel f34;
    private javax.swing.JLabel f4;
    private javax.swing.JLabel f5;
    private javax.swing.JLabel f6;
    private javax.swing.JLabel f7;
    private javax.swing.JLabel f8;
    private javax.swing.JLabel f9;
    private javax.swing.JButton jButton1;
    private javax.swing.JLabel jLabel2;
    private javax.swing.JPanel jPanel1;
    // End of variables declaration//GEN-END:variables
}
```