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**Assignment Cover Letter**

**(Individual Work****)**

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|  |  |
| **Course Code** | **: COMP6335** |  |  | | **Course Name** | | **: Introduction to Programming** | |
| **Class** | **: L1AC** |  |  | | **Name of Lecturer(s)** | | **:** 1. Bagus Kerthyayana | |
|  |  |  |  | |  | | 2. Stavin | |
| **Major** | **: Computer Science** |  |  | |  | |  | |
| **Title of Assignment**  (if any) | : **Personality Test Program** | |  |  | |  | |  |
| **Type of Assignment**    **Submission Pattern** | **: Final Project** |  |  | |  | |  | |
| **Due Date** | **: 6-11-2016** |  |  | | **Submission Date** | | **: 6-11-2016** | |

The assignment should meet the below requirements.

1. Assignment (hard copy) is required to be submitted on clean paper, and (soft copy) as per lecturer’s instructions.
2. Soft copy assignment also requires the signed (hardcopy) submission of this form, which automatically validates the softcopy submission.
3. The above information is complete and legible.
4. Compiled pages are firmly stapled.
5. Assignment has been copied (soft copy and hard copy) for each student ahead of the submission.

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Signature of Student:

Ignatia Stellarista

(Name of Student)

**Title: Personality Test Program**

1. **DESCRIPTION**

Personality Quiz program is a program that will asks several multiple choice questions about basic personal interest or opinion, and in the end you will be given a description about your personality. Every choice (a, b, or c) has their own score. This program will record and sum the score every time there’s a choice input. Every result also has its own score. The sum of the score will decide the result.

1. **A. DESIGN/PLAN**

**HIERARCHY CHART**

Answer

class

**CLASS DIAGRAM**

|  |
| --- |
| Answer |
| - answer:char  - mark:int = 0 |
| + getAnswer():char  + getMark():int  + setAnswer(answer:char):void  + setMark(mark:int):void  + printAnswer():void |

**B. EXPLANATION OF EACH FUNCTIONS**

1. Class.h

Class Answer

* In this class, there are two private members, answer:char and mark:int=0
* In the public, there is one constructor and five functions.
* Answer()

This is used to initialize the objects in the private or calling the class.

* setAnswer(answer:char):void
* This function used to initialize answer:char with some validations.
* This will be the base for the answer input in int main().
* This function will calculate the answer input.
* getAnswer():char

This function used to return the answer:char.

* setMark(mark:int=0):void

This function is used to initialize the mark.

* getMark():int

This function is used to return the mark:int.

* printResult():void
* This function is used to print the results.
* There are five results with some validations based on the calculated answer result.

1. Main.cpp
2. Header

* #include <iostream>

This standard library is for input and output streams.

* #include <cstdlib>

This standard library is needed to support the system function.

* #include “class.h”

This is used to access the class.h header.

1. Int main()

* There is a front page display asking the user to put their name.
* After the user input their name, it will continue to the second display, which displays a greeting and some instructions.
* This display use system(“pause”) to make the user really read the instruction before displaying the questions. If the user already read it, they can press any key to continue or displaying the next statement.
* This program use system(“CLS”) to clear the screen and make every question displayed separately.
* After the user press any key on the keyboard, the first question will be displayed and the user can type the answer based on the instruction.
* There are thirteen questions written in the main function.
* The answer input and the input validation are based or connected to the void setAnswer(char answer) function in Answer class in class.h.
* Everytime the user input an answer, it will be calculated.
* After the user answer the thirteen questions, the result will be displayed.
* The result display based on void printResult() function in Answer class in class.h.

1. **A. THINGS I LEARNED DURING THE PROCESS**

Friday, 7th October 2016

On the first week of October, I already decided that I will made a Personality Test Program. I made the plan first using hierarchy chart. The chart itself was still not valid and might edited soon. The plan was uploaded to Github using via upload.

Friday, 14th October 2016

I made a simple example code with example questions, only shows how the display will be, without any input validation. I also updated my plan to a more proper format. I learned how to make a proper plan format by seeing Aldi’s plan.

I finally learned how to use Git Bash command line to clone and push my file to Github. I pushed my files to Github via commend line.

Friday, 21st October 2016

I finally learned how to validate the input using if else statement but it still didn’t work, so I tried to change the display style but again, it didn’t work. I was still trying to figure out the error. I updated my final project but the validation still didn’t work. I tried to push my files again via commend line but it didn’t work or I missed something. I asked my friend and he teach me how to properly clone and push file. I finally learned again and I become get used to it. I pushed my file to Github via commend line.

Friday, 28th October 2016

I finally knew my mistake in the previous program the reason why the validation didn’t work. I went back to the first display style and it worked. During this week, I finally learned about class and want to use it in my program but I still didn’t know how to apply it in my program. I pushed my file to Gitbash via command line.

Friday, 4th November 2016

I finally learned to how apply class to my program. Weeks before, I always updated with example questions but this time I finally use the real questions that will be displayed in the presentation. I also separated the files between the main and the class.

My program is very simple, but looking back at my own self on the first week of the class, when I had zero knowledge, in addition knowing I am a slow learner and need a lot of time to learn, I feel proud and at least I understand the basics. I am happy and glad I learned programming, specifically with C++ language.

**B. PROBLEMS I HAVE OVERCOME**

* Mostly personal problems came to interlude me from doing my final project and any assignment in general. I am a deeply emotional person and think too much. I easily carried away with my emotion if something happen. I often think something unnecessary. Funnily it was implemented while making a program. Like example the mistake I have in the final project was actually a very simple mistake. I was more focused on how the style of the program is instead of checking the basic things that really needed in order a program to works properly. I finally overcome my problem and learned my lesson.
* I also have a hard time managing my time. I was still in a transition between High School life and University life. There are also many things I have to do outside University’s assignments. It was a tiring experience but very challenging and now I finally learned how to manage time. I am also very glad and thankful because there are many people help and supports me.

1. **CODE**

class.h

#ifndef CLASS\_H\_INCLUDED

#define CLASS\_H\_INCLUDED

#include <iostream>

using namespace std;

class Answer

{

private:

char answer;

int mark = 0;

public:

/\*To call the class\*/

Answer()

{

this->answer=answer;

this->mark=mark;

}

/\*Initialized answer:char\*/

void setAnswer(char answer)

{

/\*Pointing that the answer in the private class is also the answer in this function\*/

this->answer=answer;

/\*Answer validation for the input\*/

/\*Each answer has a score or mark and will be calculated\*/

if (answer == 'a' || answer == 'A'){

mark += 3;

} else if (answer == 'b' || answer == 'B'){

mark += 2;

} else if (answer == 'c' || answer == 'C'){

mark += 1;

/\*Use while loop so the program will keep asking the user to put the right input if the user always put the wrong input\*/

} while (answer != 'a' && answer != 'A' && answer != 'b' && answer != 'B' && answer != 'c' && answer != 'C')

{

/\*Display the warning and ask the user to enter a valid input\*/

cout << "Invalid answer.\n"<<"Please enter a valid selection, either a, b, or c.\n";

cin >> answer;

}

}

char getAnswer()

{

return answer; //return answer

}

void setMark(int mark)

{

this->mark=mark;

}

int getMark()

{

return mark; //return mark

}

/\*Display the result with validations\*/

void printResult()

{

/\*The sum of the mark will decided which result the user get\*/

if (mark >= 13 & 17 >= mark)

{ cout<< "Result:\n\n";

cout<< "You think yourself as an inferior.\n\n";

cout<< "No one is born inferior. Everyone is superior and a winner.\n"

<< "You're too shy to express yourself.\n"

<< "You're afraid people might avoid you if you're wrong\n"

<< "You should try to express yourself more because\n"

<< "although not everyone has the same thoughts as you,\n"

<< "you will find some people who will be with you.\n"

<< "You just need to be a little more confident~\n";

}

if (mark >= 18 & 22 >= mark)

{ cout<< "Result:\n\n";

cout<< "You're tend to be a shy person\n\n";

cout<< "You're a person who don't want to take risk\n"

<< "because you're afraid to be blamed if you make mistake.\n"

<< "Everyone has a potential including you.\n"

<< "Try to overcome it so your potential can be unleashed.\n";

}

if (mark >= 23 & 28 >= mark)

{ cout<< "Result:\n\n";

cout<< "You're a confident person~\n\n";

cout<< "You have enough confidence and placed yourself well.\n"

<< "You know well how to interact with others.\n"

<< "Positioning yourself if important to you.\n";

}

if (mark >= 29 & 34 >= mark)

{ cout<< "Result:\n\n";

cout<< "You're a really confident person~\n\n";

cout<< "You have a huge confident.\n"

<< "You're a person people can rely on and can express yourself well.\n"

<< "Being able to learn new things is you most powerful strength.\n";

}

if (mark >= 35 & 39 >= mark)

{ cout<< "Result:\n\n";

cout<< "You're a narcissist\n\n";

cout<< "Be careful!\n"

<< "It's good to have confidence but don't be too much!\n"

<< "Your overflowing confidence can sometimes make people uncomfortable.\n"

<< "Try to control it.\n";

}

}

};

#endif // CLASS\_H\_INCLUDED

Main. cpp

#include <iostream> // input output stream > to run cin/cout

#include <cstdlib> // to run system function

#include "class.h"

using namespace std;

int main()

{

/\*Declare the string input\*/

string name;

/\*The front page display\*/

cout << "----------------------------------------" << endl;

cout << "| |" << endl;

cout << "| Personality Test |" << endl;

cout << "| (@PsikologiID) |" << endl;

cout << "| |" << endl;

cout << "----------------------------------------" << endl;

cout << "Write your name: ";

cin >> name;

/\*Clear the screen after the input to move to the next display\*/

system("CLS");

/\*Display greetings and instructions\*/

cout << " Hello " << name << "!\n\n";

cout << "Welcome to Stella's Personality Test Program!\n\n";

cout << "This test will decided what kind of person you're in three categories: "<<endl;

cout << "- a not confident person\n";

cout << "- a confident person\n";

cout << "- a narcissist\n";

cout << "Please choose the answer that suits you the most!\n";

cout << "choose by typing a, b, or c~"<< endl<<endl;

system("pause"); //To let the user to press any key to continue

system("CLS");

/\*Declare the char input\*/

char answer;

/\*Declare the class\*/

Answer input;

/\*Display the question\*/

cout << "1) In your opinion, what kind of person are you?"<<endl;

cout << "A. I am a special person\n"<<

"B. I am like the others\n"<<

"C. I am not better than the others\n";

cin >> answer;

input.setAnswer(answer); //Connect the input with the validation in the void setAnswer(char answer) function

system("CLS");

cout << "2) Can you influence the others?"<<endl;

cout << "A. I have the natural ability to influence the others\n"<<

"B. I can influence the others if I want\n"<<

"C. I am easily influenced by the others\n";

cin >> answer;

input.setAnswer(answer);

system("CLS");

cout << "3) Critics can make me really embarrassed."<<endl;

cout << "A. Never\n"<<

"B. Not really\n"<<

"C. Yes\n";

cin >> answer;

input.setAnswer(answer);

system("CLS");

cout << "4) In my opinion, I am a reliable leader."<<endl;

cout << "A. Yes\n"<<

"B. Maybe\n"<<

"C. No\n";

cin >> answer;

input.setAnswer(answer);

system("CLS");

cout << "5) In a group, you usually positioned yourself as?"<<endl;

cout << "A. I always want to be the leader\n"<<

"B. My friends usually recommend me to be the leader\n"<<

"C. I don't mind just being a follower\n";

cin >> answer;

input.setAnswer(answer);

system("CLS");

cout << "6) In my opinion, I am a reliable leader."<<endl;

cout << "A. I can do many things well\n"<<

"B. I accept and believe in myself\n"<<

"C. I often think I am a foolish person\n";

cin >> answer;

input.setAnswer(answer);

system("CLS");

cout << "7) How do you interact and socialize with people?"<<endl;

cout << "A. I always or often started a conversation\n"<<

"B. I feel comfortable making acquaintances\n"<<

"C. I tend to have a hard time to socialize or making new friends\n";

cin >> answer;

input.setAnswer(answer);

system("CLS");

cout << "8) In a meeting, what you usually do?"<<endl;

cout << "A. I usually lead the meeting\n"<<

"B. I am more to listening\n"<<

"C. I am too shy to give my opinion or idea\n";

cin >> answer;

input.setAnswer(answer);

system("CLS");

cout << "9) You're in front of the audiences, what's the thing that usually happened?"<<endl;

cout << "A. I am confident. Even sometimes excessive\n"<<

"B. I am confident but still a bit nervous\n"<<

"C. I am too shy to give my opinion or idea\n";

cin >> answer;

input.setAnswer(answer);

system("CLS");

cout << "10) In your opinion, what obstacles usually encountered in a friendship?"<<endl;

cout << "A. My friend does not understand what I am sain\n"<<

"B. Miscommunication\n"<<

"C. I feel like my friends only pay attention to my weakness\n";

cin >> answer;

input.setAnswer(answer);

system("CLS");

cout << "11) What usually the reason behind a fight?"<<endl;

cout << "A. Unappreciated opinion\n"<<

"B. Miscommunication\n"<<

"C. Rudeness\n";

cin >> answer;

input.setAnswer(answer);

system("CLS");

cout << "12) What kind of place that you like?"<<endl;

cout << "A. A place of people\n"<<

"B. A comfortable place\n"<<

"C. A quiet place\n";

cin >> answer;

input.setAnswer(answer);

system("CLS");

cout << "13) What is your reason if you want to reject a task?"<<endl;

cout << "A. The task is too easy\n"<<

"B. You don't have the capabilities\n"<<

"C. Feel like you will fail\n";

cin >> answer;

input.setAnswer(answer);

system("CLS");

/\*Display the result based on the validation in void printAnswer() function\*/

input.printResult();

return 0;

}

References

@PsikologiID. (2016). *Who am I? 3 Reborn True Personality Test (Jujur & Termukan Keunikan Dirimu).* Jakarta, Indonesia: PT. Lintas Kata