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<b>Due Date:</b>	By 11:55pm Feb 2nd, 2018
<b>Evaluation:</b>	3% of final mark (see marking rubric at the end of handout)
<b>Late Submission:</b>	none accepted
<b>Purpose:</b>	The purpose of this assignment is to help you learn Java identifiers, assignments, strings, input/output, selection and flow of control statements: if, if/else.
<b>CEAB/CIPS Attributes:</b>	Design/Problem analysis/Communication Skills

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**General Guidelines When Writing Programs:**

Include the following comments at the top of your source codes

```
// -----  
// Assignment (include number)  
// Written by: (include your name and student id)  
// For COMP 248 Section (your section) - Winter 2018  
// -----
```

- In a comment, give a general explanation of what your program does. As the programming questions get more complex, the explanations will get lengthier.
- Include comments in your program describing the main steps in your program. Focus in your comments rather on the why than the how.
- Display a welcome message.
- Display clear prompts for users when you are expecting the user to enter data from the keyboard.
- All output should be displayed with clear messages and in an easy to read format.
- End your program with a closing message so that the user knows that the program has terminated.

**Question 1**

Write a program that asks the user for several pieces of information, and displays them on the screen afterward as a summary.

- first name
- last name
- major
- year
- student id number
- login name
- GPA (0.0 to 4.3)

Assume the first name, last name, major and login have no spaces in them, in other words are one word long or have a hyphen in them.

Here are a few sample outputs to illustrate the expected behavior of your program. You should follow the same formatting as shown below.

Note: user input is highlighted in grey.

```
-----  
Student Information System  
-----  
First name: Jane  
Last name: Doe  
Major: COMPSCI  
Year: 3  
ID: 250876234  
Login: j_doe  
GPA (0.0 - 4.3): 4.2  
  
Your student information:  
    Login: j_doe  
    ID: 250876234  
    Name: Doe, Jane  
    Field and year: COMPSCI, 3  
    GPA: 4.2  
  
That's all folks!
```

## Question 2

Write a program that asks a user his/her name and age and displays the following depending on their age:

- Age is less than 16, say "You can't drive."
- Age is less than 18, say "You can't vote."
- Age is less than 25, say "You can't rent a car."
- Age is 25 or over, say "You can do anything that's legal."

Here is an example of the output to illustrate the expected behavior of your program. You may change the formatting of the output but the program should follow the described behavior.

Note: user input is highlighted in grey.

```
/*****  
/*****      All the things you cannot do...      *****/  
/*****  
Hi there! What's your name? Greta  
Nice to meet you Greta, how old are you? 24  
Ok, Greta did you know, you can't rent a car.  
  
Talk to you next time!
```

```
/*****  
/***** All the things you cannot do... *****/  
/*****/  
Hi there! What's your name? Luke  
Nice to meet you Luke, how old are you? 17  
Ok, Luke did you know, you can't vote.  
  
Talk to you next time!
```

```
/*****  
/***** All the things you cannot do... *****/  
/*****/  
Hi there! What's your name? Greg  
Nice to meet you Greg, how old are you? 15  
Ok, Greg did you know, you can't drive.  
  
Talk to you next time!
```

```
/*****  
/***** All the things you cannot do... *****/  
/*****/  
Hi there! What's your name? Maggie  
Nice to meet you Maggie, how old are you? 45  
Ok, Maggie did you know, you can do anything that's legal!  
  
Talk to you next time!
```

### Question 3

Isabel Briggs Myers developed a theory that there are 16 different personality types. Each type has four letters associated with it, I or E (Introvert/Extrovert), S or N (Sensor or iNtuitive), T or F (Thinker or Feeler) and J or P (Judger or Perceiver). (<https://www.truity.com/view/types>)

Develop a simple program that will determine a user's personality based on their response to 4 questions that are to be answered by them on a scale of 1 to 10. The first question is to ask the user if they want to do the quiz, whether the answer is yes/no, the user will still do the quiz but a different message will be printed in each case. Next, get the user to answer the four questions below on a scale from 1-10. Based on the answer to each question, a letter of the personality type should be set as indicated below.

#### Q1: How do you get your energy?

1- Spending time alone

10- Spending time with others

Score <= 5 indicates introvert (I) and >5 indicates extrovert (E)

**Q2: How do you see the world & gather information?**

1- In concrete terms

10- In abstract terms

**Score** <= 5 indicates Sensors (S) and >5 indicates iNtuitives (N)

**Q3: How do you make your decisions?**

1- Using my head

10- Using my heart

**Score** <= 5 indicates Thinkers (T) and >5 indicates Feelers (F)

**Q4: How much do you like to plan?**

1- Make plans far in advance 1

10- Go with the flow

**Score** <= 5 indicates Judgers (J) and >5 indicates Perceivers (P)

Here are a few sample outputs to illustrate the expected behavior of your program.

Note: user input is highlighted in grey. Note you can assume a smart user, and do not have to do error handling in case they enter data incorrectly.

```
-----
The Simple Personality Test!
-----
Are you ready for a personality test? (Yes/No): Yes
All right here we go!

Answer the following questions on a scale from 1-10.
Q1: How do you get your energy?
    1 -- By spending time alone
    10 -- By spending time with others
4
Q2: How do you see the world & gather information?
    1 -- In concrete terms
    10 -- In abstract terms
7
Q3: How do you make your decisions?
    1 -- Using my head
    10 -- Using my heart
9
Q4: How much do you like to plan?
    1 -- Make plans far in advance
    10 -- Go with the flow
2
Your personality type is: *INFJ*
To find out more about that type of personality check out:
https://www.truity.com/view/types
Hope you had fun! See you next time!
```

-----  
The Simple Personality Test!  
-----

Are you ready for a personality test? (Yes/No): No  
Alright, well we're going to do it anyways!

Answer the following questions on a scale from 1-10.

Q1: How do you get your energy?

1 -- By spending time alone

10 -- By spending time with others

7

Q2: How do you see the world & gather information?

1 -- In concrete terms

10 -- In abstract terms

3

Q3: How do you make your decisions?

1 -- Using my head

10 -- Using my heart

5

Q4: How much do you like to plan?

1 -- Make plans far in advance

10 -- Go with the flow

10

Your personality type is: \*ESTP\*

To find out more about that type of personality check out:

<https://www.truity.com/view/types>

Hope you had fun! See you next time!

## Submitting Assignment 1

Please check your course Moodle webpage on how to submit the assignment.

### Evaluation Criteria for Assignment 1 (20 points)

<b>Source Code</b>	
<b>Comments for all 3 questions (5 pts.)</b>	
Description of the program (authors, date, purpose)	2 pts.
Description of variables and constants	1 pt.
Description of the algorithm	2 pts.
<b>Programming Style for all 3 questions (3 pts.)</b>	
Use of significant names for identifiers	1 pt.
Indentation and readability	1 pt.
Welcome Banner/Closing message	1 pt.
<b>Question 1 (3 pts.)</b>	
Prompting user/reading data	1.5 pts.
Display results	1.5 pts.
<b>Question 2 (3 pts.)</b>	
Read in name and age	1 pt.
Determine what person can't do	1 pt.
Display correct results	1 pt.
<b>Question 3 (6 pts.)</b>	
Prompting user/reading data	1 pt.
Ask 4 questions and set correct personality characteristic	2 pts.
Determine personality type	1 pts.
Display results	1 pt.
<b>TOTAL</b>	<b>20 pts.</b>