

**PROJECT 2: INFORMATICS 1A**

Answer **ALL** questions below:

**QUESTION 1****(20)**

Write a complete Java program that prompts the user to input two integer values and outputs the largest and smallest numbers. The program includes JOptionPane for both the input and output statements.

**QUESTION 2****(20)**

2.1 Write a program called SumSquares that includes an integer return type method called Squares(). The method accepts two integer parameters (num1 and num2) and calculates the sum of these two squares ( $\text{num1}^2 + \text{num2}^2$ ). The main method includes the method call, passing the following values (2, 3) to the Squares() method and the output displaying the sum of the squares in the command line window.

**(10)**

2.2 Write a Java program called Pattern that prints an 8-by-8 checker box pattern using an if loop structure as follows:

**(10)**

```
#####
#####
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```

**QUESTION 3****(20)**

Write a Java program called Decision that includes a while loop to prompt the user to enter 5 marks using the JOptionPane statement and a System. Out statement to output a message inside the loop highlighting a pass mark  $\geq 50$  and  $\leq 100$ . Any other mark will output a messaging stating it's a fail.

Example of the expected output is as follows:

```
55 is a pass
12 is a fail
```

**Assignment Guidelines:**

- Word Limit: Your assignment (excluding index, cover page, list of references and appendices) must not exceed 3500 words.
- Text: Font type should be Arial/Times New Roman and Font size 12
- Line spacing: 1.5
- Reference: At least **8 academic sources** of reference must be used. (These include textbooks, journal articles and internet sources that are relevant to your field of study. Academic sources do not include Wikipedia and blogs). The MANCOSA study guide must not be used as a source of reference. You must include Reference list at the end of your assignment. Information quoted/paraphrased from sources listed in your Reference list must be referenced in-text. The Harvard system of referencing must be used.
- Copy and paste your Java code from your text editor or IDE to your word document. If possible, include a screenshot of your output.
- It is imperative that students proof-read and edit their assignments prior to submitting it. Assignments must be free from errors and of a professional standard.