

Pseudocode Problems Week 3

Instructions

- This week there are 4 problems for you to solve and write Pseudocode for.
- All 4 solutions should be on a single Notepad document and saved using your student number and name (e.g. NoelCarey_B000123456.txt)
- When writing your solutions, keep in mind the 5 standard guide points.
 1. Program explanation at the start.
 2. One statement per line.
 3. Use of white space and indentation.
 4. Capitalising of Key Words and good structure
 5. Correct logic and flow.
- Upload your single text file to the appropriate Moodle section.
- REMEMBER: your task here is to write Pseudocode and get the logic and structure of the program correct. You don't need to know all the nuts and bolts of a programming language.

Don't forget your program Structure Guide:

//Declare variables

//Get input from user

//Processing

//Output or Results

Symbol	Meaning
<	Less than
>	Greater than
<=	Less than or equal to
>=	Greater than or equal to
==	Equal to
!=	Not equal to
&&	Logical AND
	Logical OR

Problem 1

Write a single Java program that evaluates the **truth** or **falsity** of the following expressions using **PRINT()** statements as shown in the program output below. **NOTE:** you do not need to declare any variables.

- I. $5 - 1 \neq 3$
- II. $100 \% 50 == 0$
- III. $(21 + 7) / 4 \geq 100$

```
5 - 1 != 3 is true
100 % 50 == 0 is true
(21 + 7) / 4 >= 100 is false
```

Problem 2

Write a single Java program that declares two integer variables called x and y. Assign x = 4, y = 10 and write Boolean expressions that represent the statements below. Your program should output the results as shown below.

- a) X is an even number;
- b) X multiplied by 5 is less than 7 squared;
- c) Y minus X is positive;
- d) Y cubed is less than 100. (noted cubed is $Y*Y*Y$)

```
x is an even number is true
x multiplied by 5 is less than 7 squared is true
y minus x is positive is true
y cubed is less than 100 is false
```

Problem 3

Write a program to read a student's grade out of 100 from the keyboard. The program should print one of **PASS** or **FAIL**. A pass is any grade of 40% or higher.

```
Enter grade: 21
FAILED
StephenSheridan@Lpt-50017434 solutions % java Question3.java
Enter grade: 41
PASSED
StephenSheridan@Lpt-50017434 solutions %
```

Problem 4

Write a Pseudocode program to read a month number and print its month name. For example, an input of 10 would result in an output of October.

```
Enter month number: 10
October
```