UNIVERSITY OF MORATUWA   **ITE 1122**

Faculty of Information Technology

Bachelor of Information Technology (BIT) External Degree

ITE 1122 - Fundamentals of Programming

Assignment 02 (Practical Exam)

Time allowed: 1 Hour

Instructions to candidates:

a) This practical paper contains 01 question in three pages (including the cover page).

b) You are required to implement the entire java code in a single file.

c) You may use Notepad, Notepad++, NetBeans, Eclipse, IntelliJ IDEA or similar IDE for the implementation.

d) Indication of question number and sub-question numbers are not required.

e) Compile and test the java code.

f) Copy the entire code you implemented and paste to the Moodle upload textbox.

   (**Important:** Only copying and pasting the code to the Moodle is allowed. File upload link is not available).

Q1: Assume that you are a software engineer at *"New Hydria Textiles"* company. You are required to implement a java program to display the salary details of all the employees of Hydria Textiles according to the following instructions.

- The name of the employee, year joined, and the basic salary should be entered via the keyboard.
- Create a class called ***BonusCalc*** and create *main()* method.
- Implement a function called ***isPermanent()*** to check whether an employee is permanent or temporary. Employees with more than or equal to 5 years' experience are considered permanent, otherwise temporary. **yearJoined** should be passed as a parameter to the function, and it should return true if the employee is permanent, otherwise false.

  [25 Marks]

  The prototype of the function is as follows:
  boolean isPermanent (int yearJoined)

  Hint: use following code to get the current year.
  import java.util.Calendar;
  Calendar.getInstance().get(Calendar.YEAR);

- Implement a function called ***getBonus()*** to calculate the bonus amount of an employee. The bonus is calculated based on the basic salary. Permanent employees get 50% of basic salary as a bonus and temporary employees get the bonus as per the following table.

Basic Salary	Bonus Percentage
Sal < 10,000	30%
10,000<=Sal < 50,000	35%
Sal >= 50,000	40%

  The prototype of the function is as follows:
  double getBonus(double basicSal, int yearJoined)
  You may use the previous functions you have already implemented.

  [25 Marks]

- Write a function called ***displaySalSlip()*** to display the salary details.

  The prototype of the function is as follows:
  void displaySalSlip(String name, int yearJoined, double basicSal)
  You may use the previous functions you have already implemented.
  Note: Sample inputs/outputs of ***displaySalSlip()*** function is given in Figure 1 (Page 3).

  [25 Marks]

- In the *main()* function, do the followings.
  - Get keyboard inputs for name of the employee, year joined and basic salary.
  - Create an object called 'Bcal' of the **BonusCalc** class you created.
  - Call *displaySalSlip()* method of the 'Bcal' object.

  [25 Marks]

```
Enter employee name:Kasun
Enter year joined:2015
Enter basic salary:100000
        Salary Slip
        --------------
Name                 :Kasun
Year Joined          :2015
Permanent/Temporary  :Permanent
Basic Salary (Rs)    :100000.0
Bonus Amount (Rs)    :50000.0
Total Amount (Rs)    :150000.0
```

Figure 1: Sample inputs and outputs of *displaySalSlip()*

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