Practical Assessment – Functions

Description

Write a C++ program that prepares a payroll earnings statement. All employees have a base salary depending on their length of service. Your program calculates the EPF for the month based on the gross pay and the following rate:

- EPF (by Employee)   : 11%
- EPF (by Employer)   : 13%

And, the following is the rate of contributions to Social Security Protection (SOCSO):

- SOCSO (by Employee)   : RM 14.75
- SOCSO (by Employer)   : RM 51.65

Define constants for the rates given above.

The program is to prompt the use for the input as shown below. (Bold numbers are typical responses.)

```
Base Salary : RM 3500      Enter
```

The output is shown below. Be aware to align the decimal points.

```
                   PAYROLL STATEMENT
Base Salary (Gross Pay)                         RM   3500.00

Deductions:
EPF   (by employee - 11%)                       RM    385.00
SOCSO (by employee)                             RM     14.75
------------------------------------------------------------
Total Deductions:                               RM    399.75

Net Pay [Gross Pay - Total Deductions]          RM   3100.25

Other Contributions by Employer:
EPF   (by employer - 13%)                       RM    455.00
SOCSO (by employer)                             RM     51.65
------------------------------------------------------------
Total of Other Contributions:                   RM    506.65
```

The program's design should use `main` (*20 marks*) and at least the FOUR(4) functions described below:

a. <u>Function 1</u>:   Read salary from the keyboard.   (*15 marks*)

b. Calculate values. This section consists of two sub-functions. Each function will return the respective value.

- <u>Function 2</u>: Calculate the *EPFs* with *gross pay*. This function will be called for TWO(2) times to calculate both EPFs (by employee and by employer) and assign them in the respective variables.   (*15 marks*)

- <u>Function 3</u>: Calculate *total deductions* and *total of other contributions* with *EPF* and *SOCSO*. This function will be called for TWO(2) times to calculate both data and assign them in the respective variables.   (*15 marks*)

c. <u>Function 4</u>: Print the result (the payroll statement).   (*25 marks*)

Note that *10 marks* are reserved for the presentation of the program, such as indent style, comments, and choice of variable and function names.

Submission

This is a practical assessment. You are allowed to refer to reference books and notes. However, **NO** *discussion* and **NO** *online access* (except WBLE) allowed during the practical session.

This practical assessment will be 2 hours. You have another 20 minutes to prepare your program and upload it to WBLE. There is a link created in WBLE subject page for you to submit source code of your program. You are required to upload the soft copy of your program by the deadline. Late submission will not be entertained.

In addition, prepare a report (preferable using word processing software) that contains print out of your program and sample output(s). Submit the report to your tutor on **Week 8** during your practical session. Do remember to attach marking sheet as the cover page of your report.

The total mark of this practical assessment is 100. The 100 marks will contribute 10% of your final mark. Your program will be marked for **correctness**, **programming style**, **adequate testing** and **documentation/comments**. It's your responsibility to understand the requirements of the task and prepare well for your submission. No mark will be given if the report is not received and marks will be deducted for late submissions.