

Subject: PRF192- PFC

Workshop 03

Name: Your_name_here

Student ID: Your_student_ID

Objectives:

(1) Practicing skills at analyzing and implementing programs using user-defined functions and array.

(2) Making familiar with function design, input and output of a function

Submission:

Please submit your work including a report and source code.

The report **MUST** be a pdf file. Name of the file should contain your name and your student ID,

such as Workshop3_yourName_yourStudentID.pdf

The report must contain the pictures of all the test cases that you have done to test your programs

The file of source code **MUST** be named Workshop3_yourName_yourStudentID.c

If you are required to submit at class time, please submit the file of source code only.

Please test your script carefully (it means script should be runnable first) before you submit to the system.

Grading programs:

Write a menu to call three following functions

1. Function 1: Calculate personal income tax

In Viet Nam, each people has to pay for yearly personal income tax. The general rule is if your income per month is less than or equal to 9 million VND, you will not pay. Otherwise you will pay. Specifically, if the income is from 9 000 001 VND to 15 000 000 VND, you must pay 10% of the amount of income that over 9 million VND. If the income is over 15 million VND, you must pay 20% of the amount of income that over 15 million VND. Write a program to calculate the tax that a person must pay, given that the her/his income is inputted from the keyboard.

2. Function 2 : Check whether a number is power of 2

Input a number from the keyboard, then check whether the number is power of 2.

3. Function 3: Calculate the sum of the following series.

Given the sum as follows. Here, x and n are inputted from the keyboard.

$$x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \dots$$

Remember:

- Design the prototypes of the functions first.
- Please test your program where walkthrough (run the program by hand) should be done along the lines of code.
- Please pay attention on **PLAGIARISM** that we have agreed at the beginning of the course.
- Template is described as in Workshop 1.