Northwestern Polytechnic University

CE450L Lab - Embedded Engineering Lab
Lab Assignment #3

Due day: 10/6/2021

Instruction:

1. **Push the source code to GitHub or answer sheet in** **word file**
2. **Please follow the code style rule like programs on handout.**
3. **Overdue homework submission could not be accepted.**
4. **Takes academic honesty and integrity seriously (Zero Tolerance of Cheating & Plagiarism)**

Objectives:

In this week, student will write c program to solve basic problem by simple statements, such as *"printf"* and *"scanf"* etc.

The Laboratory Assignments:

- **Requirements:** write programs for the following questions, and then post them in GitHub including program description in header block comments area.

    1. Write program to find sum of two numbers.

    Output:
    Enter two numbers: 5   6
    sum=11

```c
#include<stdio.h>
#include<conio.h>
void main()

{
   int a,b,sum;
        printf("Enter two numbers :");
        scanf("%d %d",&a,&b); /*Enter spacebar key while entering two values,eg :5
(space) 2 and press enter*/
        sum = a+b;
        printf("=>%d+%d=%d",a,b,sum);
        getch();
```

2. Write program to find area and circumference of circle

Output:
enter radius of a circle: 5

area of circle=78.000
circumference=31.4

```
#include<stdio.h>
#include<conio.h>
void main()

{
   float a,area,circum;
        printf("Enter radius of a circle = ");
        scanf("%f",&a);
        area = 3.14*(a*a);
        circum=2*3.14*a;
        printf("=>area of circle = %0.3f\n",area);
        printf("=>circumference of circle = %0.1f",circum);
        getch();
}
```

3. Write program to find the simple interest

Output:
enter principle, rate of interest & time to find simple interest: 500   5   2

simple interest=50

[hint] $$simple\ interest = \frac{(principle)*(rate\ of\ interest)*(time)}{100}$$

```
#include<stdio.h>
#include<conio.h>
void main()
{
   long int principle, time, rate_of_interest, SI;


   printf("enter principle, rate of interest & time to find simple interest: ");
   scanf("%ld %ld %ld",&principle, &rate_of_interest ,&time); /*Enter space after
each input */
   SI = (principle * time * rate_of_interest) / 100;
   printf("Simple Interest = %ld", SI);
        getch();
}
```

4. Write program to convert temperature from degree centigrade to Fahrenheit

Output:
enter temp in centigrade: 32

temp in Fahrenheit=89.59998

[hint] $Fahrenheit = 1.8 * centigrade + 32$

```c
#include<stdio.h>
#include<conio.h>
void main()
{
   float centigrade,fahren;
        printf("enter temp in centigrade: ");
        scanf("%f",&centigrade);
        fahren = 1.8* centigrade+32;
        printf("=>temp in Fahrenheit=%f",fahren);
        getch();
}
```

5. Write program to calculate sum of 5 subjects and find percentage

Output:
enter marks of 5 subjects: 60   65   55   60   60
enter assumption total number: 500

sum=300
percentage=60.000
[hint] $percentage = \frac{sum}{total}$

```c
#include<stdio.h>
#include<conio.h>
void main()
{
   int sum ,a,b,c,d,e;
   float percentage,total;
        printf("enter marks of 5 subjects:");
        scanf("%d %d %d %d %d",&a,&b,&c,&d,&e);
        printf("enter assumption total number:");
        scanf("%f",&total);
        sum=a+b+c+d+e;
        printf("=>Sum=%d\n",sum);
        percentage=(sum/total)*100;
        printf("=>Percentage= %0.3f",percentage);
        getch();
}
```