Evaluation 1

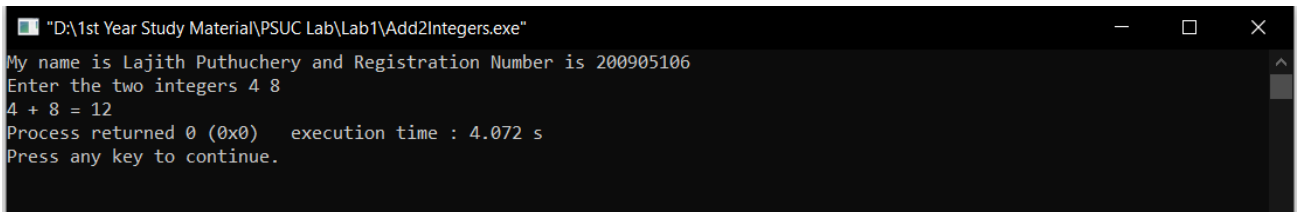
Simple C Programs – Lab 1

1.Write a C program to add two integers a and b read through the keyboard. Display the result using third variable sum.

Program:

```
#include <stdio.h>


int main()
{
   int sum,a,b;
   printf("My name is Lajith Puthuchery and Registration Number is 200905106\n");
   printf("Enter the two integers");
   scanf("%d %d", &a, &b);
   sum = a + b;
   printf("%d + %d = %d ",a,b,sum);
   return 0;
}
```

Output:



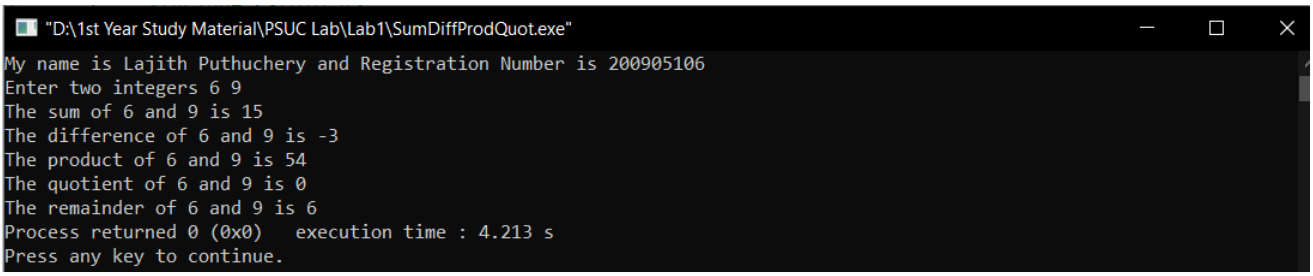
2.Write a C program to find the sum, difference, product and quotient of 2 numbers.

Program:

```
#include <stdio.h>


int main()
{
   int a,b;
   printf("My name is Lajith Puthuchery and Registration Number is 200905106\n");
   printf("Enter two integers");
```

```
    scanf("%d %d",&a, &b);
    int sum, diff, prod, quot, mod;
    sum = a+b;
    printf("The sum of %d and %d is %d\n",a,b,sum);
    diff = a-b;
    printf("The difference of %d and %d is %d\n",a,b,diff);
    prod = a*b;
    printf("The product of %d and %d is %d\n",a,b,prod);
    if(b == 0)
    {
        printf("Divison by 0  is not defined");
    }
    else
    {
        quot = a/b;
        mod = a%b;
        printf("The quotient of %d and %d is %d\n",a,b,quot);
        printf("The remainder of %d and %d is %d",a,b,mod);
    }
    return 0;
}
```

Output:



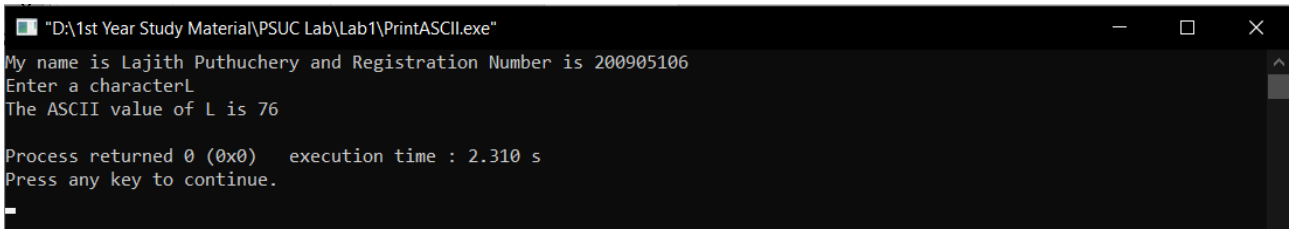
3.Write a C program to print the ASCII value of a character

Program:

```
#include <stdio.h>


int main()
{
```

```
    char c;
    printf("My name is Lajith Puthuchery and Registration Number is 200905106\n");
    printf("Enter a character");
    scanf("%c",&c);
    printf("The ASCII value of %c is %d\n",c,c);
    return 0;
}
```

Output:



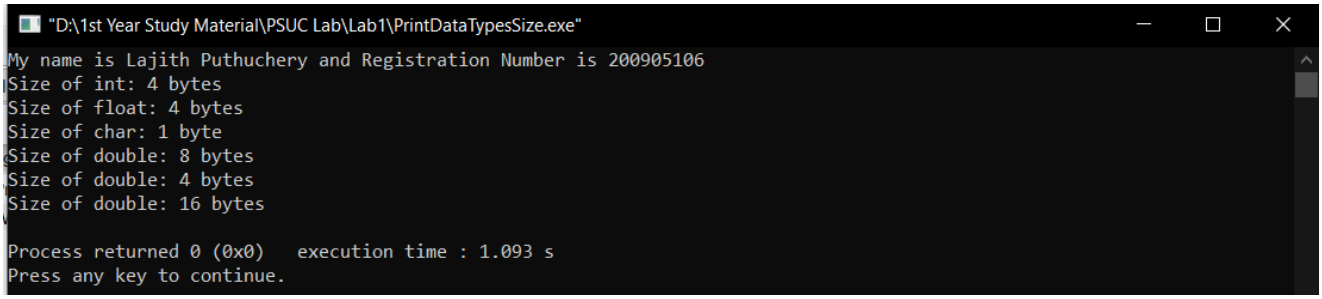
4.Write a C program to display the size of the data type int, char, float, double, long int and long double using size of ( ) operator.

Program:

```
#include <stdio.h>


int main()
{
    int intdata;
    float floatdata;
    char chardata;
    double doubledata;
    long int longint;
    long double longdouble;


    printf("My name is Lajith Puthuchery and Registration Number is 200905106\n");


    printf("Size of int: %zu bytes\n", sizeof(intdata));
    printf("Size of float: %zu bytes\n", sizeof(floatdata));
    printf("Size of char: %zu byte\n", sizeof(chardata));
    printf("Size of double: %zu bytes\n", sizeof(doubledata));
    printf("Size of double: %zu bytes\n", sizeof(longint));
```

```
    printf("Size of double: %zu bytes\n", sizeof(longdouble));



    return 0;
}
```

Output:

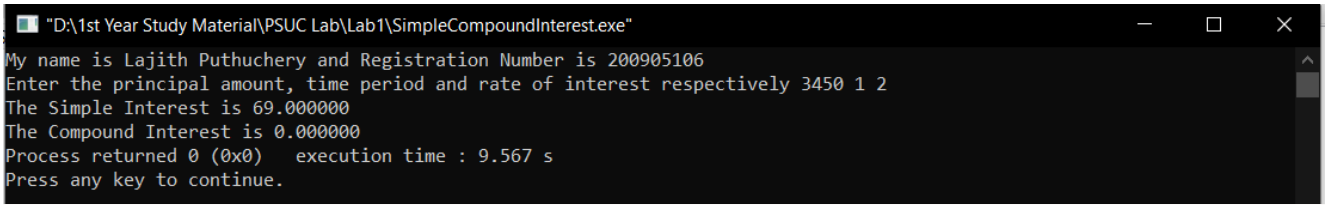


5.Input P, N and R to compute simple and compound interest. [Hint : SI = PNR/100, CI = P(1+R/100)^N-P]

Program:

```
#include <stdio.h>
#include <math.h>


int main()
{
    int n,r;
    float si,ci,p;
    printf("My name is Lajith Puthuchery and Registration Number is 200905106\n");
    printf("Enter the principal amount, time period and rate of interest respectively");
    scanf("%d %d %d",&p,&n,&r);
    si = (p*n*r)/100;
    ci = p*pow(1+r/100,n)-p;
    printf("The Simple Interest is %f\n",si);
    printf("The Compound Interest is %f",ci);


    return 0;
}
```

Output:

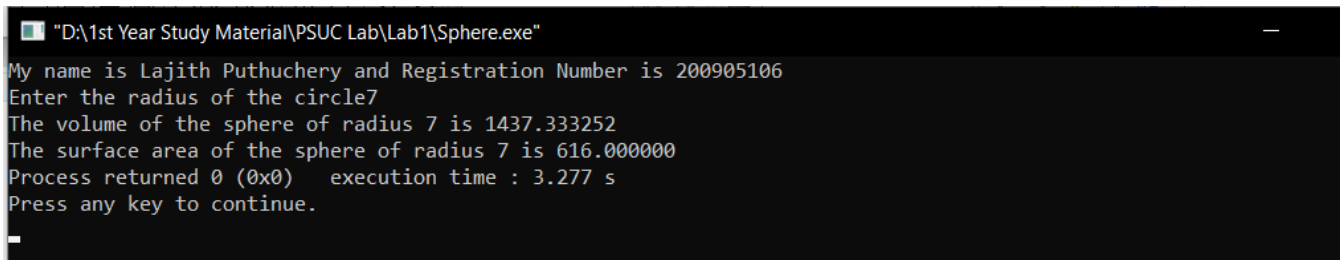


6.Input radius to find the volume and surface area of a sphere. [Hint: volume = (4πr3)/3, Area=4πr2]

Program:

```
#include <stdio.h>
#include <math.h>

#define PI 3.142857

int main()
{
   int r;
   float vol, area;
   printf("My name is Lajith Puthuchery and Registration Number is 200905106\n");
   printf("Enter the radius of the circle");
   scanf("%d",&r);
   vol = (4*PI*pow(r,3))/3;
   area = 4*PI*pow(r,2);
   printf("The volume of the sphere of radius %d is %f\n",r,vol);
   printf("The surface area of the sphere of radius %d is %f",r,area);

   return 0;
}
```

Output:

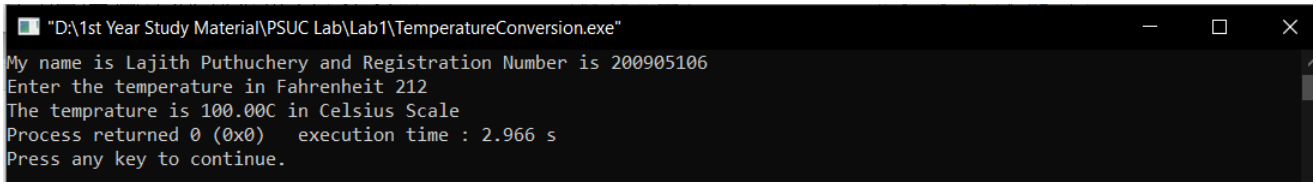


7.Convert the given temperature in Fahrenheit to Centigrade. [Hint:C=5/9(F-32)]

Program:

```
#include <stdio.h>

int main()
{
   float tempC, tempF;
   printf("My name is Lajith Puthuchery and Registration Number is 200905106\n");
   printf("Enter the temperature in Fahrenheit");
   scanf("%f",&tempF);
   tempC = (5.0/9.0)*(tempF-32);
   printf("The temprature is %.2fC in Celsius Scale",tempC);
   return 0;
}
```

Output:



8.Write a C program to evaluate the following expression for the values a = 30, b=10, c=5,d=15

*(i) (a + b) * c/ d*

*(ii) ((a + b) * c) /d*

*(iii) a + (b * c)/ d*

*(iv)(a + b) * (c /d)*

Program:

```
#include <stdio.h>

int main()
{
   printf("My name is Lajith Puthuchery and Registration Number is 200905106\n");
   int a=30, b=10, c=5, d=15;
   int exp1, exp2, exp3, exp4;
   exp1 = (a+b)*c/d;
   printf("The result of the expression (a+b)*c/d is %d\n",exp1);
   exp2 = ((a+b)*c)/d;
```

```
    printf("The result of the expression ((a+b)*)c/d is %d\n",exp2);
    exp3 = a + (b*c)/d;
    printf("The result of the expression a+(b*c)/d is %d\n",exp3);
    exp4 = (a+b)*(c/d);
    printf("The result of the expression (a+b)*(c/d) is %d\n",exp4);


    return 0;
}
```

Output: