**Practical : 9**

**CODE :**

#include<stdio.h>

#include<math.h>

float func1(float x)

{

return exp(-0.5\*pow(x,2));

}

float func2(float x)

{

return sqrt(1+pow(x,2));

}

float func3(float x)

{

return(pow(cos(x),2)\*sqrt(1+pow(x,3)));

}

int main()

{

int i,n;

float h1,h2,h3,a1=0,a2=0,a3=-1,b1=2,b2=6,b3=2,sum1=0.0, sum2=0.0,sum3=0.0,value1, value2,value3;

printf("Enter the number of subintervals(even) : ");

scanf("%d",&n);

h1=(b1-a1)/(float)n;

h2=(b2-a2)/(float)n;

h3=(b3-a3)/(float)n;

for(i=1;i<n;i++)

{

sum1+=2\*func1(a1+i\*h1);

sum2+=2\*func2(a2+i\*h2);

sum3+=2\*func3(a3+i\*h3);

}

value1=(h1/2)\*(func1(a1)+func1(b1)+sum1);

value2=(h2/2)\*(func2(a2)+func2(b2)+sum2);

value3=(h3/2)\*(func3(a3)+func3(b3)+sum3);

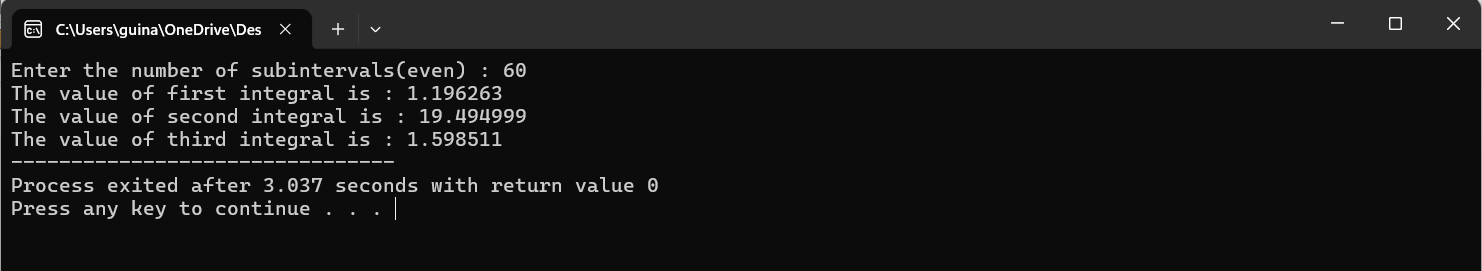
printf("The value of first integral is : %f\n",value1);

printf("The value of second integral is : %f\n",value2);

printf("The value of third integral is : %f",value3);

}

**OUTPUT :**

****