**LAB 10**

**Objectives**

The concept of inline function

***Inline Functions***

**Task 1**

Write a C++ program that uses an inline function Circle Area to prompt the user for the radius of a circle and to calculate and print the area of the circle.

#include<iostream>

using namespace std;

inline float area(float r);

void main()

{

float r,x;

cout<<"Enter radius : ";

cin>>r;

x=area(r);

cout<<"\nArea is "<<x<<endl;

system("pause");

}

inline float area(float r)

{

return 3.14\*r\*r;

}

**Task 2**

Write a C++ program that uses an inline function “Convert” that converts the weight in pounds to kilogram.

One pound =0.4535 kg

#include<iostream>

using namespace std;

inline float weight(float w);

void main()

{

float w,x;

cout<<"Enter Weight in pounds : ";

cin>>w;

x=weight(w);

cout<<"\nWeight in kg is "<<x<<endl;

system("pause");

}

inline float weight(float w)

{

return 0.4535\*w ;

}

**Task 3**

Write a C++ program that uses an inline function “Convert” that converts the temperature in Celsius to Fahrenheit. C  \*  9/5 + 32 = °F

#include<iostream>

using namespace std;

inline float temperature(float c);

void main()

{

float c,x;

cout<<"Enter Temperature in Celusius : ";

cin>>c;

x=temperature(c);

cout<<"\nTemperature in Fahrenheit is "<<x<<endl;

system("pause");

}

inline float temperature(float c)

{

return c\*(1.8+32) ;

}

***Arrays in a function***

**Task 1**

Write a function that returns the average of 10 integers

In main you have to input an array of ten integers

#include<iostream>

using namespace std;

float average(int arr1[]);

void main()

{

int arr1[10];

float x;

cout<<"Enter 10 integer numbers "<<endl;

for(int i=0;i<10;i++)

{

cout<<"\t ";

cin>>arr1[i];

}

cout<<"\n"<<endl;

x=average(arr1);

cout<<"Average of 10 integer number is "<<x<<endl;

system("pause");

}

float average(int arr1[])

{

float avg;

int sum=0;

for(int i=0;i<10;i++)

{

sum=sum+arr1[i];

}

avg=sum/10;

return avg;

}

**Task 2**

Write a function that returns the smallest numbers.

In main you have to input an array of ten integers

#include<iostream>

using namespace std;

int smallest(int arr1[]);

void main()

{

int x,arr1[10];

cout<<"Enter 10 integer numbers "<<endl;

for(int i=0;i<10;i++)

{

cout<<"\t ";

cin>>arr1[i];

}

cout<<"\n"<<endl;

x=smallest(arr1);

cout<<"Smallest number is "<<x<<endl;

system("pause");

}

int smallest(int arr1[])

{

int temp;

for (int i=0;i<10;i++)

{

for (int j=0;j<9;j++)

{

if (arr1[j]>arr1[j+1])

{

temp=arr1[j];

arr1[j]=arr1[j+1];

arr1[j+1]=temp;

}

}

}

for (int k=0;k<1;k++)

{

arr1[k];

return arr1[k];

}

}

**Task 3**

Write a function that returns the largest alphabet.

In main you have to input an array of ten capital letters.

#include<iostream>

using namespace std;

char largest(char arr1[]);

void main()

{

char x,arr1[10];

cout<<"Enter 10 Alphabet "<<endl;

for(int i=0;i<10;i++)

{

cout<<"\t ";

cin>>arr1[i];

}

cout<<"\n"<<endl;

x=largest(arr1);

cout<<"Largest Alphabet is "<<x<<endl;

system("pause");

}

char largest(char arr1[])

{

char temp;

for (int i=0;i<10;i++)

{

for (int j=0;j<9;j++)

{

if (arr1[j]>arr1[j+1])

{

temp=arr1[j];

arr1[j]=arr1[j+1];

arr1[j+1]=temp;

}

}

}

for (int k=9;k<10;k++)

{

arr1[k];

return arr1[k];

}

}