



ASSIGNMENT # 1

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LAB MANUAL 1

HOME TASK -1:

```
#include <iostream>
#include <cmath>
using namespace std;
int main()
{ int x1,y1;
  int x2,y2;

  cout<<"please enter your x1,y1 values "<< endl;
  cin>> x1;
  cin>> y1;
  cout<<"please enter your x2,y2 values "<< endl;
  cin>> x2;
  cin>> y2;

  double distance =sqrt (pow(x2-x1 ,2) + pow(y2-y1 ,2)) ;
  cout<<"THE DISTANCE IS "<<distance<<endl;
  return 0;
}
```

```
please enter your x1,y1 values
10
5
please enter your x2,y2 values
20
10
THE DISTANCE IS 11.1803

-----
Process exited after 15.27 seconds with return value 0
Press any key to continue . . .
```

HOME TASK -2:

```
#include <iostream>
using namespace std;
int main()
{ double centimetres;
  cout<< "enter the length in centimetres"<<endl;
  cin>> centimetres;

  cout<<"length in metres " <<endl;
  cout<< centimetres/100 <<endl;
  cout<<"length in km " <<endl;
  cout<< centimetres/100000<<endl;
  return 0;
}
```

```
enter the length in centimetres
200
length in metres
2
length in km
0.002

-----
Process exited after 2.456 seconds with return value 0
Press any key to continue . . .
```

HOME TASK 3:

```
#include<iostream>
using namespace std;
int main (){
    int a,b;
    cout<<"Enter the value of a"<< endl;
    cin>>a;

    cout <<"Enter the value of b"<<endl;
    cin>>b;
    float polynomial = a*a +2*a*b + b*b;
    cout<<"polynomial is"<<endl;
    cout<<polynomial<<endl;
    return 0;
}
```

```
Enter the value of a
4
Enter the value of b
6
polynomial is
100

-----
Process exited after 3.78 seconds with return value 0
Press any key to continue . . .
```

HOME TASK -4:

```
#include <iostream>
using namespace std;

int main() {
    float Fahrenheit;
    cout << "Enter the value in Fahrenheit: ";
    cin >> Fahrenheit;

    float celsius = (Fahrenheit - 32) * 5/9;

    cout << "Value in Celsius: " << celsius << endl;
    return 0;
}
```

```
Enter the value in Fahrenheit: 46
Value in Celsius: 7.77778

-----
Process exited after 5.655 seconds with return value 0
Press any key to continue . . .
```

LAB MANUAL -2

LAB TASK-1:

```
#include<iostream>
using namespace std;
int main()
{
    int age;

    cout<< "Enter your age"<<endl;
    cin>> age;
    if(age >= 18)
    {
        cout<<"you are eligible for vote"<<endl;
    }

    else if (age< 18)
    {
        cout<<"you are not eligible for vote"<<endl;
        return 0;
    }
}
```

```
Enter your age
19
you are eligible for vote
-----
Process exited after 1.794 seconds with return value 0
Press any key to continue . . .
```

LAB TASK- 2

```
#include<iostream>
using namespace std;
int main()
{int number;
cout<<"Enter the number plz"<<endl;
cin>> number;

if(number>10 && number<50)

{cout<<" The number is in range"<<endl;}

else

{
cout<<" the number is not in range"<<endl;}

return 0;
```



```
Enter the number plz
43
The number is in range

-----
Process exited after 4.574 seconds with return value 0
Press any key to continue . . .
```

LAB TASK -3:

```
#include<iostream>
using namespace std;
int main()
{ int number1, number2;
  cout<<"Enter the number 1"<<endl;
  cin>> number1;

  cout<<"Enter the number 2"<<endl;
  cin>> number2;

  if(number1 > number2){
    cout<<"Maximum value is"<<endl;
    cout<< number1 << endl;}
  else if (number2 > number1) {
    cout<<"Maximum value is"<< endl;
    cout<< number2<< endl;
  }

  else{
    cout<<"Both numbers are equal"<<endl;
  }
  return 0;
}
```

```
Enter the number 1
60
Enter the number 2
80
Maximum value is
80

-----
Process exited after 6.97 seconds with return value 0
Press any key to continue . . .
```


LAB TASK -4:

```
1  #include <iostream>
2  using namespace std;
3  int main (){
4  int score1, score2, score3;
5  cout<<"Enter score for first exam"<<endl;
6  cin>> score1;
7
8  cout<< " Enter score for second exam"<<endl;
9  cin>> score2;
10
11 cout<<"Enter score for 3rd exam"<<endl;
12 cin>> score3;
13
14 double average = (score1+ score2+score3)/3;
15 if( average>=60){
16     cout<<"Average score is"<<endl;
17     cout<< average<<endl;}
18 else{
19     cout<<" Average score is"<<endl;
20     cout << " Your score is below 60"<<endl;}
21 return 0;
22
23
24
```

```
Enter score for first exam
80
Enter score for second exam
70
Enter score for 3rd exam
60
Average score is
70

-----
Process exited after 14.55 seconds with return value 0
Press any key to continue . . .
```

HOME TASK-1:

```
#include<iostream>
using namespace std;
int main(){
    int score;
    cout<<"Enter the score of student"<<endl;
    cin>>score;
    if(score>=90 and score<=100)
    {cout<<" Grade is"<<endl;
    cout<<"A"<<endl;}

    else if( score>=75 and score<=90)
    {cout<<"Grade is"<<endl;
    cout<<"B"<<endl;}

    else if( score>=60 and score<=75 )
    {cout<<" Gradeis "<<endl;
    cout<<"C"<<endl;}

    else if (score>=45 and score<=60)
    {cout<<"Grade is"<<endl;
    cout<<"D"<<endl;}

    else if (score>=0 and score<=45)
    {cout<<"Grdae is"<<endl;
    cout<<"F"<<endl;}
```

```
Enter the score of student
76
Grade is
B

-----
Process exited after 9.987 seconds with return value 0
Press any key to continue . . .
```

HOME TASK-2

```
#include<iostream>
using namespace std;
int main(){
    int number;
    cout<<"Enter the number"<<endl;
    cin>>number;
    if (number %2==0 and number %5==0 )
    {cout<< " It is both even and divisible by 5"<<endl;}
    else{
        cout<<"It is not both even and divisible by 5"<<endl;}
    return 0;
}
```

```
Enter the number
82
It is not both even and divisible by 5
-----
Process exited after 5.97 seconds with return value 0
Press any key to continue . . .
```

HOME TASK-3:

```
#include<iostream>
using namespace std;
int main()
{
    int year;
    cout<<"Enter the year"<<endl;
    cin>>year;
    if( year%4==0){
        cout<<" The year is leap year"<<endl;}

    else{ cout<<"The year is not leap year"<<endl;}
    return 0;
}
```

```
Enter the year
2022
The year is not leap year

-----
Process exited after 8.228 seconds with return value 0
Press any key to continue . . .
```

HOME TASK-4:

```
#include<iostream>
using namespace std;
int main()
{
    float gpa;
    int classes_attend,total_classes;
    cout<<"Enter your gpa"<<endl;
    cin>>gpa;
    cout<<"Enter the total nmb of classes"<<endl;
    cin>> total_classes;
    cout<<"Enter the nmb of classes attend"<<endl;
    cin>> classes_attend;
    float attendance_percentage=(classes_attend/total_classes)*100;
    if(gpa>=3.5 && attendance_percentage>=80)
    {
        cout<<" You are eligible for scholarship"<<endl;}

    else
    {
        cout<<"you are not eligible for scholarship"<<endl;}

    return 0;}
```

Enter your gpa

3.1

Enter the total nmb of classes

100

Enter the nmb of classes attend

40

you are not eligible for scholarship

Process exited after 14.5 seconds with return value 0

Press any key to continue . . .

HOME TASK -5:

```
#include<iostream>
using namespace std;
int main()
{
    char character;
    cout<<"enter the character"<<endl;
    cin>> character;
    if( character=='a' || character=='e' || character=='i' || character=='o' || character=='u')
    {
        cout<<"The character is lower case vowel"<<endl;
    }
    else if( character=='A' || character=='E' || character=='I' || character=='O' || character=='U')
    {
        cout<<" The character is upercase vowel"<<endl;
    }
    else{cout<<"The character is consonant"<<endl;}

    return 0;
}
```

```
enter the character
g
The character is consonant
-----
Process exited after 3.059 seconds with return value 0
Press any key to continue . . .
```