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Section:-CSE 21

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Subject:- OOP LAB

ASSIGNMENT –2

```
//Q1. Write a program in C++ to print hello on the screen.
#include <iostream>
using namespace std;
int main()
{
    cout << "Hello";
      return 0;
}
```

OUTPUT


```
//Q.2. Write a C++ program to find prime numbers between 1-
1000. [Create a prime() function]

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

```
    bool isPrime;
    for(int n=2;n<1000;n++)
    {
        isPrime=isPrimeNumber(n);
        if(isPrime==true)
        cout<<n<<" ";
    }

   return 0;
}
 int isPrimeNumber(int n)
 {
    bool isPrime=true;
    for(int i=2;i<=n/2;i++)
    {
        if(n%i==0)
        {
            isPrime=false;
            break;
        }
    }
    return isPrime;
 }
```

OUTPUT

//Q.3. Write a C++ program to take two numbers from the command line argument and sum both these numbers and display the output.

```cpp
#include<iostream>
using namespace std;
int atoi(int n1, int n2)
{
    return n1+n2;
}
int main(){
    int a,b,sum1;
    cout<<"Enter any two number:"<<endl;
    cin>>a;
    cin>>b;
    cout<<"result="<<atoi(a,b);
    return 0;
}
```

OUTPUT

```cpp
//Q.4. Create a class which stores name, roll number and total marks for a student. Input the data for a student and display it.
#include <iostream>
using namespace std;
struct student
{
    char name[50];
    int roll;
    float marks;
};
```

```
int main()
{
    student s;
    cout << "Enter information," << endl;
    cout << "Enter name: ";
    cin >> s.name;
    cout << "Enter roll number: ";
    cin >> s.roll;
    cout << "Enter marks: ";
    cin >> s.marks;
    cout << "\nDisplaying Information," << endl;
    cout << "Name: " << s.name << endl;
    cout << "Roll: " << s.roll << endl;
    cout << "Marks: " << s.marks << endl;
    return 0;
}
```

OUTPUT

```
//Q.5. Modify the program 4) to store marks in 10 subjects.
Calculate the total marks and percentage of a student and
display it.

#include <iostream>
using namespace std;
class student
{
string name;
int roll;
```

```
int marks[10];
int tmarks=0;
float percentage;
public:
void getdata()
{
cout<<"Enter Name: ";
cin>>name;
cout<<"Enter Roll Number: ";
cin>>roll;
cout<<"Enter Marks of ten subjects: ";
for(int i=0; i<10; i++)
{
cout<<"Enter Marks of Subject "<<i+1<<" : ";
cin>>marks[i];
tmarks = (tmarks + marks[i]);
}
}
void display()
{
cout<<"=="<<endl;
cout<<"Student's Name: "<<name<<endl;
cout<<"Roll Number: "<<roll<<endl;
for(int i=1; i<=10; i++)
{
cout<<"Marks of Subject "<<i<<" : ";
cout<<marks[i]<<endl;
}
cout<<"Total Marks: "<<(tmarks)<<endl;
```

```
cout<<"Percentage : "<<(tmarks/10)<<"%"<<endl;
}
};
int main()
{
student s;
s.getdata();
s.display();
return 0;
}
```

OUTPUT

```
//Q.6. Create a class complex which stores real and
imaginary part of a complex number.

#include<iostream>
using namespace std;
class Complex{
public:
    int real;
    int imag;
    void setvalue()
    {
        cin>>real;
        cin>>imag;
    }
    void display()
    {
```

```
        cout<<real<<"+"<<imag<<"i"<<endl;
    }
    void sum(Complex c1, Complex c2)
    {
        real=c1.real+c2.real;
        imag=c1.imag+c2.imag;
    }
    };
int main()
    {
        Complex c1,c2,c3;
        cout<<"Enter real and imaginary part of first
complex number"<<endl;
        c1.setvalue();
        cout<<"Enter real and imaginary part of second
complex number"<<endl;
        c2.setvalue();
        cout<<"Sum of two complex numbers is"<<endl;
        c3.sum(c1,c2);
        c3.display();
    return 0;
    }
```

OUTPUT

//Q.7. Create a class which stores x and y coordinates of a point. Calculate distance between two given points and display it

```
#include <iostream>
#include<math.h>
using namespace std;
class dist
{
int x,y;
public:
void getdata()
{
cout<<"Enter x and y coordinates : ";
cin>>x>>y;
}
void display()
{
cout<<"("<<x<<","<<y<<")"<<endl;
}
double add(dist a, dist b)
{
return sqrt(pow(b.y - a.y, 2) + pow(b.x - a.x, 2));
}
};
int main()
{
dist c1,c2;
c1.getdata();
c2.getdata();
cout<<"Coordinate 1: ";
c1.display();
cout<<"Coordinate 2: ";
```

```
c2.display();
c1.add(c1,c2);
cout<<"Distance between them = "<<c1.add(c1,c2)<<endl;
return 0;
}
```

OUTPUT