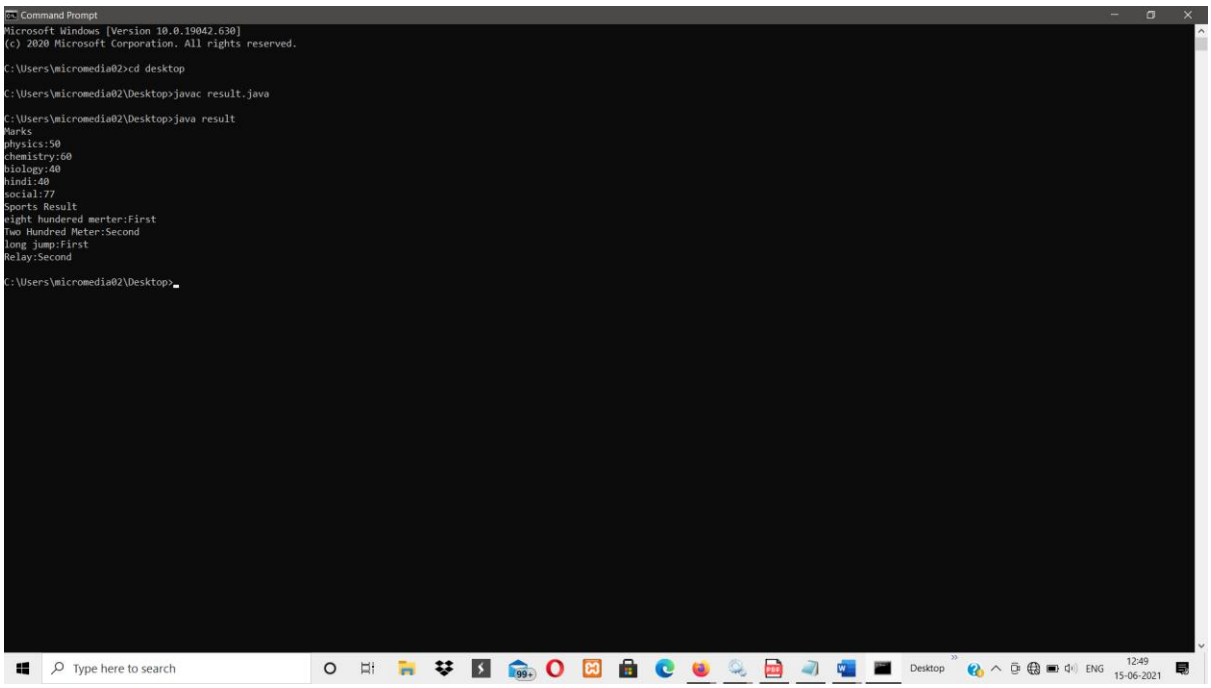
5) Create classes Student and sports.Create another class result inherited from student and sports.Display the academic and sports score of a student.

```
interface student
{
 void stresullt();
}
interface sports
{
 void spresult();
}
class result implements student,sports{
 public void spresult()
 {
 String eighthundred="First";
 String twohundred="Second";
 String longjump="First";
 String relay="Second";
 System.out.println("Sports Result");
 System.out.println("eight hundered merter:"+ eighthundred);
 System.out.println("Two Hundred Meter:"+twohundred);
 System.out.println("long jump:"+longjump);
 System.out.println("Relay:"+relay);
 }
 public void stresullt()
 {
 int physics=50;
 int chemistry=60;
 int biology=40;
 int hindi=40;
 int social=77;
```

```
System.out.println("Marks");
System.out.println("physics:"+physics);
System.out.println("chemistry:"+chemistry);
System.out.println("biology:"+biology);
System.out.println("hindi:"+hindi);
System.out.println("social:"+social);
}
public static void main(String[] args)
{
result r = new result(); r.stresullt();
r.spresult();

}
}
```



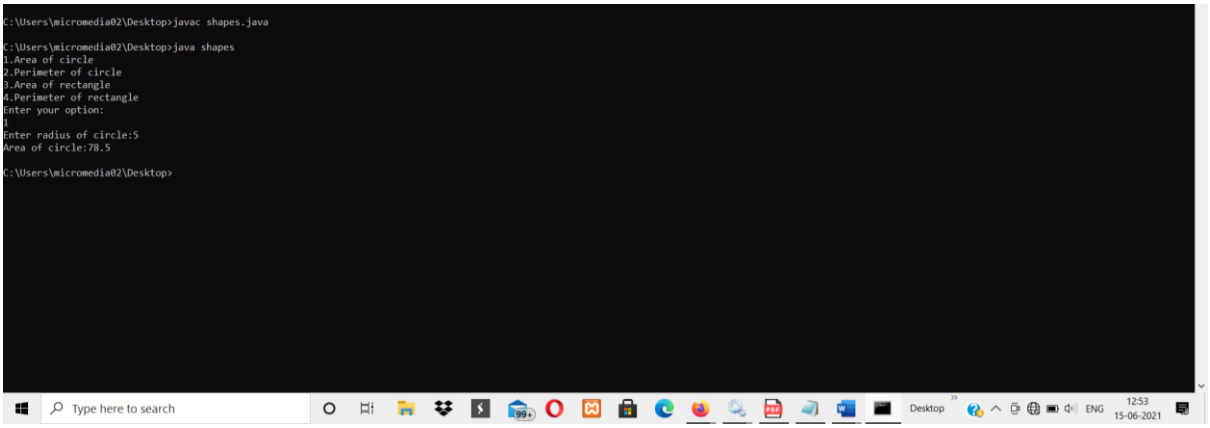
6)Create an interface having prototype of functions area() and perimeter().Create two classes circle and rectangle which implements the above interface.Create a menu driven program to find area and perimeter of objects.

```
import java.util.Scanner;
interface Shape
{
```

```
 void input();
 void area();
 void perimeter();
}
class Circle implements Shape
{
 int r = 0;
 double pi = 3.14, ar = 0,per=0;
 public void input()
 { Scanner s = new Scanner(System.in); System.out.print("Enter radius of circle:");
 r= s.nextInt();
 }
 public void area()
 {
 ar = pi * r * r;
 System.out.println("Area of circle:"+ar);
 }
 public void perimeter()
 {
 per = 2 * pi * r;
 System.out.println("Perimeter of circle:"+per);
 }
}
class Rectangle implements Shape
{
 int l = 0, b = 0;
 double ar,per;
 public void input()
 { Scanner s = new Scanner(System.in);
 System.out.print("Enter length of rectangle:");
 l = s.nextInt();
```

```
System.out.print("Enter breadth of rectangle:");
b = s.nextInt();
}
public void area()
{
ar = l * b;
System.out.println("Area of rectangle:"+ar);
}
public void perimeter()
{
per = 2 * (l + b);
System.out.println("Perimeter of rectangle:"+per);
}
}
public class shapes
{
public static void main(String[] args)
{ int n;
Scanner s = new Scanner(System.in);
Rectangle obj1 = new Rectangle();
Circle obj2 = new Circle(); System.out.println("1.Area of circle");
System.out.println("2.Perimeter of circle");
System.out.println("3.Area of rectangle");
System.out.println("4.Perimeter of rectangle");
System.out.println("Enter your option:");
n= s.nextInt();
switch(n) {
case 1:
obj2.input();
obj2.area();
break;
```

```
case 2:
obj2.input();
obj2.perimeter();
break;
case 3:
obj2.input();
obj2.area();
break;
case 4:
obj2.input();
obj2.perimeter();
break;
default:
System.out.println("Invalid option");
}
 }
}
```



7) Prepare bill with the given format using calculate method from interface.

Order No.Date Productid name quantity price total

101 A 2 25 50 102 B 1 100 100

Net.Amount 150

```
interface bill
{
 int productdetails();
```

```
}
class product1 implements bill{
 int id = 101,quantity= 2,unit=25,total=0; String name="A";

 public int productdetails()
 {
 total = quantity * unit;
 System.out.println("Product Id :"+id);
 System.out.println("Name :"+name);
 System.out.println("Quantity :"+quantity);
 System.out.println("Unit price :"+unit);
 System.out.println("Total :"+total);
 return(total);
 }
}
class product2 implements bill{
 int id = 102,quantity= 1,unit=100,total=0;
 String name="B";

 public int productdetails()
 {
 total = quantity * unit;
 System.out.println("Product Id :"+id);
 System.out.println("Name :"+name);
 System.out.println("Quantity :"+quantity);
 System.out.println("Unit price :"+unit);
 System.out.println("Total :"+total);
 return(total);
 }
}
public class productbill
```

```
{
 public static void main(String[] args)
 {
 product1 p1 = new product1();
 product2 p2 = new product2();
 int t1= p1.productdetails();
 int t2= p2.productdetails();
 int t3=t1+t2;

 System.out.println("Net. Amount :"+t3);
 }
}
```