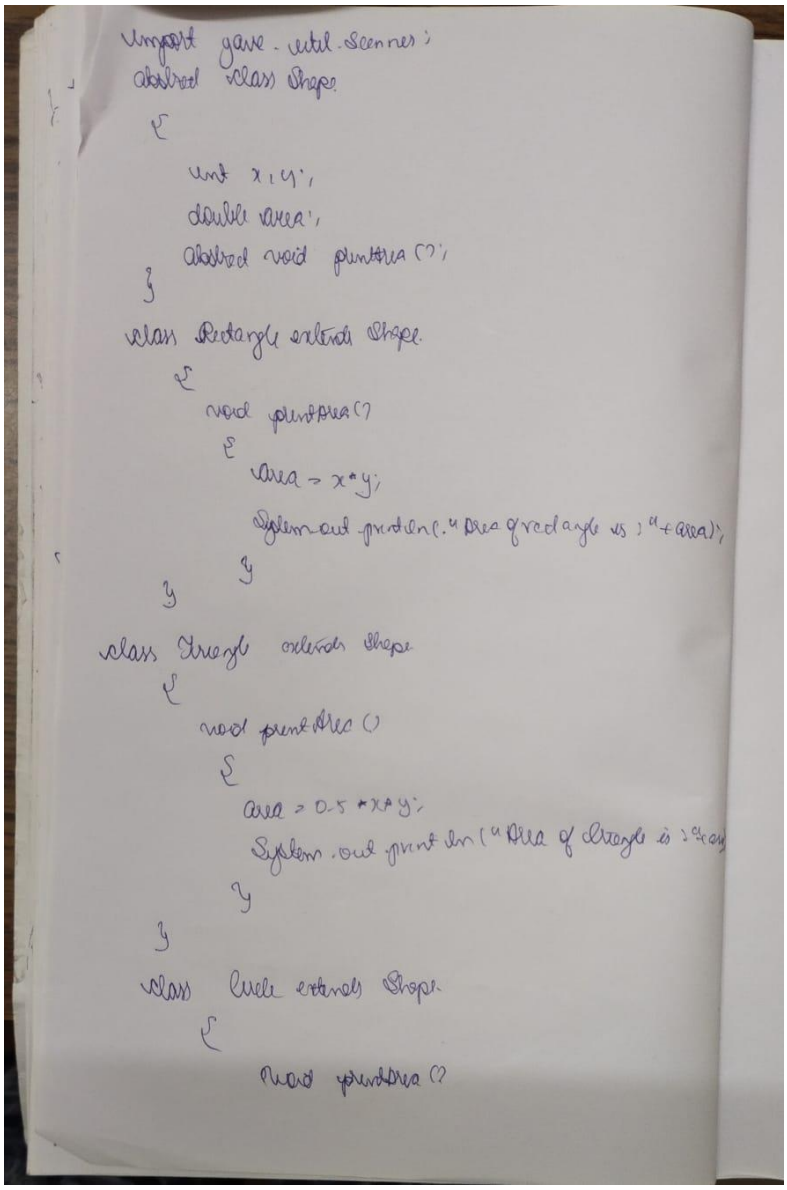
Q) Develop a Java program to create an abstract class named Shape that contains two integers and an empty method named printArea( ). Provide three classes named Rectangle, Triangle and Circle such that each one of the classes extend the class Shape. Each one of the classes contain only the method printArea( ) that prints the area of the given shape.

CODE:



```
{
    Area = 3.14 * x * x;
    System.out.println("Area of circle is "+Area);
}
}

class Area
{
    p s v. m (String args[])
    {
        Rectangle rec = new Rectangle();
        Triangle t = new Triangle();
        Circle c = new Circle();
        int ch;
        Scanner s = new Scanner(System.in);
        S.O.P ("Menu In 1. Rectangle 2. Triangle 3. Circle
            In 4. Exit In");
        Ch = s.nextInt();
        switch(ch)

        {
        case 1: S.O.P ("Enter length & breadth");
            rec.x = s.nextInt();
            rec.y = s.nextInt();
            rec.printArea();

        case 2: S.O.P ("Enter breadth & height
            t.x = s.nextInt(); t.y = s.nextInt();
            t.printArea();

        case 3: S.O.P ("Enter radius");
            c.x = s.nextInt(); c.printArea();

        default: S.O.P ("Invalid input");
}}}
```

OUTPUT:

```
C:\Users\sanja\OneDrive\Desktop\1bm21cs062>javac swm.java

C:\Users\sanja\OneDrive\Desktop\1bm21cs062>java Area
menu
1.rectangle
2.triangle
3.circle
4.exit

1
Enter length:
3
Enter breadth:
4
Area of rectangle is: 12.0
Enter height:
30
Enter breadth:
20
Area of triangle is: 300.0
Enter radius:
100
Area of circle is: 31400.0
invalid input

C:\Users\sanja\OneDrive\Desktop\1bm21cs062>
```