```java
import java.util.Scanner;

abstract class Shape{
    double a,b;
    abstract void printArea();
}
class Rectangle extends Shape{
    void printArea(){
        System.out.println("Area of rectangle is"+(a*b));
    }
}
class Triangle extends Shape{
    void printArea(){
        System.out.println("Area of Triangle is "+(0.5*a*b));
    }
}
class Circle extends Shape {
    void printArea(){
        System.out.println(" Area of circle is"+(3.14*a*a));
    }
}

class Shapearea{
    Run main | Debug main
    public static void main(String args[]){
        int n;
        Rectangle r=new Rectangle();
        Triangle t=new Triangle ();
        Circle c=new Circle ();

        while(true){
            Scanner s1=new Scanner(System.in);
            System.out.println("\n MAIN MENU\nSelect shape\n1.Rectangle\n2.Triangle\n3.cricle\nEnter choice:");
            n=s1.nextInt();

```

```
35              switch(n){
36                  case 1:
37                  {
38                  System.out.print("enter length : ");
39                      r.a=s1.nextDouble();
40                      System.out.print("Enter breadth : ");
41
42                      r.b=s1.nextDouble();
43                      r.printArea();
44                      break;
45                  }
46                  case 2:
47                  {
48                      System.out.print("Enter Length: ");
49                      t.a=s1.nextDouble();
50                      System.out.print("enter breadth: ");
51                      t.b=s1.nextDouble();
52                      t.printArea();
53                      break;
54                  }
55                  case 3: {
56                      System.out.println("Enter Radius : ");
57                      c.a=s1.nextDouble();
58                      c.printArea();
59                      break;
60                  }
61                  default: System.out.println("Invalid input");
62              }
63          }
64      }
65  }
```

```
 MAIN MENU
Select shape
1.Rectangle
2.Triangle
3.cricle
Enter choice:
1

enter length :
10

Enter breadth :
10

Area of rectangle is100.0

 MAIN MENU
Select shape
1.Rectangle
2.Triangle
3.cricle
Enter choice:
2

Enter Length:
10

enter breadth:
10

Area of Triangle is 50.0
```

```
 MAIN MENU
Select shape
1.Rectangle
2.Triangle
3.cricle
Enter choice:
3

Enter Radius :
1

 Area of circle is3.14

 MAIN MENU
Select shape
1.Rectangle
2.Triangle
3.cricle
Enter choice:
```

C: > Users > bhagy > Downloads > J Books.java > ...

```java
import java.util.Scanner;
class Book{
    String name;
    String author;
    double price;
    int numPages;

    Book(String name,String author,double price,int numpages){
        this.name=name;
        this.author=author;
        this.price=price;
        this.numPages=numPages;
    }

    void setDetails(){
        Scanner scanner=new Scanner (System.in);

        System.out.println("Enter Book name : ");
        this.name=scanner.nextLine();

        System.out.print("Enter author name : ");
        this.author=scanner.nextLine();

        System.out.println("Enter price : ");
        this.price=scanner.nextDouble();

        System.out.println("Enter number of pages : ");
        this.numPages=scanner.nextInt();
    }

    void getDetails(){
        System.out.println("Book Name : "+name);
        System.out.println("Author  : "+author);
        System.out.println("Price : Rs"+price);
        System.out.println("Number of Pages : "+numPages);
    }
```

```
2   class Book{
38      public String toString(){
39          return "Book Details : \n"+
40              "Name: "+name+"\n"+
41              "Author: "+author+"\n"+
42              "Price : "+price+ "\n"+
43              "Number of Pages : "+ numPages;
44      }
45  }
46
47  class Books{
        Run main | Debug main
48      public static void main(String[] args){
49          Scanner scanner=new Scanner(System.in);
50
51          System.out.println("Enter the number of books : ");
52          int n=scanner.nextInt();
53
54          Book[] books=new Book [n];
55
56          for(int i=0;i<n;i++){
57              System.out.println("\nEnter details for Book "+(i+1)+":");
58              books[i]=new Book("","",0.0,0);
59              books[i].setDetails();
60          }
61          System.out.println("\nDetails of all books : ");
62          for(int i=0;i<n;i++){
63              System.out.println("\nBook "+(i+1)+":");
64              books[i].getDetails();
65          }
66
67          System.out.println("\nComplete details of allbooks : ");
68          for(int i=0;i<n;i++){
69              System.out.println("\nBook "+(i+1)+":\n"+books[i].toString());
70          }
71      }
72  }
```

```
Enter the number of books :
2


Enter details for Book 1:
Enter Book name :
Ramayan

Enter author name :
Valmiki

Enter price :
108

Enter number of pages :
108


Enter details for Book 2:
Enter Book name :
Mahabharath

Enter author name :



Enter price :
120

Enter number of pages :
120
```

```
Details of all books :

Book 1:
Book Name : Ramayan
Author  : Valmiki
Price : Rs108.0
Number of Pages : 108

Book 2:
Book Name : Mahabharath
Author  :
Price : Rs120.0
Number of Pages : 120

Complete details of allbooks :

Book 1:
Book Details :
Name: Ramayan
Author: Valmiki
Price : 108.0
Number of Pages : 108

Book 2:
Book Details :
Name: Mahabharath
Author:
Price : 120.0
Number of Pages : 120
```