Source code:

```
class Welcome
{
   public static void main(String args[])
   {
      System.out.println("WELCOME JAVA");
   }
}
```

Output:

Source code:

```
class Rectangle
{
   double length, breadth;
   void setdata(double l,double b)
   {
      length = l;
      breadth = b;
   }
   double getArea()
   {
      return length*breadth;
   }
}
class findArea
{
   public static void main(String args[])
   {
   Rectangle r = new Rectangle();
   r.setdata(12.48,13);
   System.out.println("Area of Rectangle: "+ r.getArea());
   }
}
```

Output:


21mca14@user:~$ javac Rectangle.java
21mca14@user:~$ java Rectangle
Area of Rectangle: 162.24

Source Code:

```
import java.util.Scanner;
class OddEven
{
   public static void main(String args[])
   {
   Scanner sc=new Scanner(System.in);
   System.out.println("Enter the number:");
   int num = sc.nextInt();
   if(num%2==0)
   {
      System.out.println(num + " is a Even number");
   }
   else
   {
      System.out.println( num + " is an Odd ");
   }
}
}
```

Output:


21mca14@user:~$ javac OddEven.java
21mca14@user:~$ java OddEven
Enter the number:
34
34 is a Even number
21mca14@user:~$ java OddEven
Enter the number:
33
33 is a Odd

Source Code:

```
import java.util.Scanner;
class Product
{String pcode, pname;
int price;
Product(String pcode_get, String pname_get, int price_get)
{
        pcode = pcode_get; pname = pname_get; this.price = price_get;
}
void compare(Product b,Product c)
{
if(price<=b.price && price<=c.price)

        System.out.println("Lowest price of product is "+pname+" and price is
"+pcode);
if(b.price<=c.price && b.price<=price)

        System.out.println("Lowest price of product is "+b.pname+" and price is
"+b.pcode);
if(c.price<=price && c.price<=price)

        System.out.println("Lowest price of product is "+c.pname+" and price is
"+c.pcode);

}

}
class Productdet
```

```
{
        public static void main(String args[])
{
        Product p_1=new Product("A123","Radio",887);
        Product p_2=new Product("B123","Cooler",587);
        Product p_3=new Product("C123","TV",1000);
        p_1.compare(p_2,p_3);
}
}
```

Output:

Source Code:

```
import java.util.Scanner;
class MatrixAdd
{
   public static void main(String args[])
   {
      int i,j,rows,cols;
      Scanner n=new Scanner(System.in);
      System.out.println("Enter the no of rows: ");
      rows=n.nextInt();
      System.out.println("Enter the no of cols: ");
      cols=n.nextInt();
      int A[][]= new int[rows][cols];
      int B[][]=new int[rows][cols];
      System.out.println("Enter the elements of Matrix A: ");
      for(i=0;i<rows;i++)
      {
         for(j=0;j<cols;j++)
         {
         A[i][j]=n.nextInt();
         }
      }
      System.out.println("Enter the elements of Matrix B: ");
      for(i=0;i<rows;i++)
      {
         for(j=0;j<cols;j++)
         {
```

```
            B[i][j]=n.nextInt();
        }
    }
    int C[][]=new int[rows][cols];
    System.out.println(" The sum of Matrix A and B: ");
    for(i=0;i<rows;i++)
    {
        for(j=0;j<cols;j++)
        {
            C[i][j]=A[i][j]+B[i][j];
            System.out.print(C[i][j]+" ");
        }

    System.out.println();
    }
  }
}
```

Output:

```
mca@cec-H110M-S2:~/oops$ javac AddMatrix.java
mca@cec-H110M-S2:~/oops$ java AddMatrix
Enter the no of rows:
2
Enter the no of cols:
3
Enter the elements of Matrix A:
2
4
6
8
5
2
Enter the elements of Matrix B:
3
4
1
2
6
3
 The sum of Matrix A and B:
5 8 7
10 11 5
mca@cec-H110M-S2:~/oops$
```

Source Code:

```
import java.util.Scanner;
public class Complex {

    double real;
    double imag;

    public Complex(double real, double imag) {
        this.real = real;
        this.imag = imag;
    }

    public static void main(String[] args) {
        Scanner s = new Scanner(System.in);
        System.out.println("Enter the 1st complex no:  ");
        double a1 = s.nextDouble();
        double b1 = s.nextDouble();
        System.out.println("Enter the 2nd complex no:  ");
        double a2 = s.nextDouble();
        double b2 = s.nextDouble();
        Complex n1 = new Complex(a1, b1),
                n2 = new Complex(a2, b2),
                temp;

        temp = add(n1, n2);

        System.out.printf("Sum = "+temp.real+" + "+temp.imag+"i ");
```

```
    }

    public static Complex add(Complex n1, Complex n2)
    {
        Complex temp = new Complex(0.0, 0.0);

        temp.real = n1.real + n2.real;
        temp.imag = n1.imag + n2.imag;

        return(temp);
    }
}
```

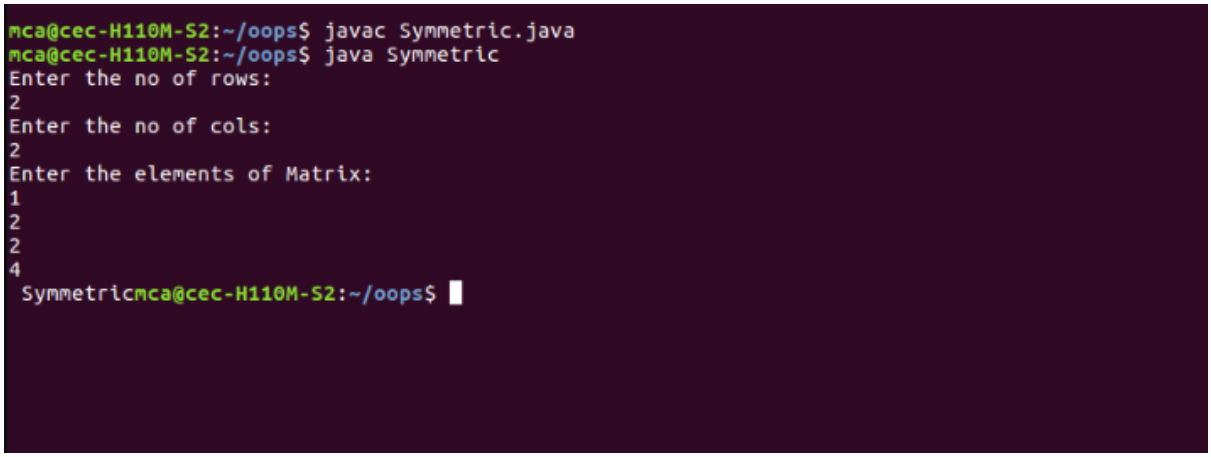
Output:

Source Code:

```
import java.util.Scanner;
class Matrix
{
	public static void main(String args[])
	{
	int i,j,rows,cols,f=0;
	Scanner n=new Scanner(System.in);
	System.out.println("Enter the no of rows: ");
	rows=n.nextInt();
	System.out.println("Enter the no of cols: ");
	cols=n.nextInt();
	if(rows!=cols)
	System.out.print(" Not symmetric");
	else
	{
		int num[][]= new int[rows][cols];
		System.out.println("Enter the elements of Matrix: ");
		for(i=0;i<rows;i++)
		{
			for(j=0;j<cols;j++)
			{
				num[i][j]=n.nextInt();
			}
		}
		for(i=0;i<rows;i++)
		{
```

```
                for(j=0;j<cols;j++)
                {
                        if(num[i][j]!=num[j][i])
                        {
                                f=1;
                                break;
                        }
                }
        }
    if(f==1)
        System.out.println("Not Symmetric");
    else
        System.out.print(" Symmetric");
        }
    }
}
```

Output:



Source Code:

```
import java.util.Scanner;
class Leapyr
{
  public static void main(String args[])
  {
    Scanner sc=new Scanner(System.in);
    int start,end;
    System.out.println("Enter the begining year: ");
    start = sc.nextInt();
    System.out.println("Enter the end year: ");
    end = sc.nextInt();
    System.out.println("Leap years: ");
    for(int i=start;i<=end;i++)
    {
       if(i%4==0||(i%100!=0)&&(i%400==0))
       System.out.println(i);
    }
  }
}
```

Output:

Source Code:

```
import java.util.Scanner;
class Test
{
public static void main(String args[])
{
        CPU o1 = new CPU();
        o1.display1();

        CPU.RAM o3 = new CPU.RAM();
        o3.set();
        o3.display();
}
}
class CPU
{       int price;
        Scanner kb = new Scanner(System.in);
        void display1()
        {
                Processor o2 =new Processor();
                o2.read();
                o2.display2();
        }
        class Processor
        {       int ncores;
                String manft;
```

```
        void read()
        {System.out.println("Enter the price of CPU ");
        price = kb.nextInt();
        System.out.println("Enter the no: of cores ");
        ncores = kb.nextInt();
        System.out.println("Enter the name of CPU manufacturer ");
        manft = kb.next();
        }
        void display2()
        {
                System.out.println("Manufacturer: " +manft);
                System.out.println("Number of cores: " +ncores);
                System.out.println("Price: " +price);
        }
}
public static class RAM
{
        Scanner kb = new Scanner(System.in);
        String manf;
        int mm;
        void set()
        {
        System.out.println("Enter the memory size ");
        mm = kb.nextInt();
        System.out.println("Enter the name of manufacturer ");
        manf = kb.next();
        }
```

```
        void display()
        {       System.out.println("Memory Size " +mm+"GB");
                System.out.println("Memory manufacturer " +manf);
        }
    }
}
```

Output: