```
 /* Devika P Sajith
S3 CSE AI 26*/
import java.util.*;
abstract class Shape {
void numberOfSides() {
}
}
class Rectangle extends Shape {
void numberOfSides() {
System.out.println("The number of sides of a Rectangle is 4");
}
}
class Triangle extends Shape {
void numberOfSides() {
System.out.println("The number of sides of a Triangle is 3");
}
}
class Hexagon extends Shape {
void numberOfSides() {
System.out.println("The number of sides of a Hexagon is 6");
}
}
class Main {
public static void main(String[] args)
{
Scanner S1 = new Scanner(System.in);
Rectangle r = new Rectangle();
Triangle t = new Triangle();
Hexagon h = new Hexagon();
```

```
r.numberOfSides();

t.numberOfSides();

h.numberOfSides();

S1.close();

}

}
```

OUTPUT

```
C:\devika\JAVA\Cycle 3\Shapes>javac shapes.java

C:\devika\JAVA\Cycle 3\Shapes>java Main

The number of sides of a Rectangle is 4

The number of sides of a Triangle is 3

The number of sides of a Hexagon is 6
```

```
/*Devika P Sajith
S3 CSE AI 26
Read a line of integer d displylay its sum.*/
import java.util.*;
class line {
public static void main(String args[]) {
int n;
int sum = 0;
Scanner s1 = new Scanner(System.in);
System.out.println("Enter integers with one space gap:");
String str = s1.nextLine();
StringTokenizer st = new StringTokenizer(str, " ");
while (st.hasMoreTokens()) {
String temp = st.nextToken();
n = Integer.parseInt(temp);
System.out.println(n);
sum = sum + n;
}
System.out.println("Sum of the integers is: " + sum);
s1.close();
}
}
```

OUTPUT

```
java -cp /tmp/RCRMq5hAAJ/line
Enter integers with one space gap:
2 4 5 1
2
4
5
1
Sum of the integers is: 12
```

```
/*Devika P Sajith
S3 CSE AI 26*/
Import java.io.FileReader;
Import java.io.FileWriter;
Import java.io.IOException;
Class file {
Public static void main(String[] args)
{
Try {
FileReader fr = new FileReader(“gfgInput.txt”);
FileWriter fw = new FileWriter(“gfgOutput.txt”);
String str = “”;
Int I;
While ((I = fr.read()) != -1) {
Str += (char)I;
}
System.out.println(str);
Fw.write(str);
Fr.close();
Fw.close();
System.out.println(
“File reading and writing both done”);
}
Catch (IOException e) {
System.out.println(
“There are some IOException”); }
}
}
```

OUTPUT

```
java -cp /tmp/ipPcFXVvX6/file
There are some IOException
```

```
 /* Devika P Sajith
S3 CSE-AI 26
Write a file handling program in Java with reader/writer*/
import java.io.*;
import java.util.*;
public class filehandling
{
static void readfile(){
FileInputStream fin = null;
try{
fin = new FileInputStream("a.txt");
int getsize=fin.available();
System.out.println("file size is "+getsize);
int i=0;
while(i<getsize){
System.out.println(fin.read());
i++;
}
}
catch(Exception e){
System.out.println("error");
}
finally
{
try
{
if (fin != null)
{
fin.close();
}
```

```
} catch (IOException e)
{
System.out.println("Error closing file:" + e.getMessage());
}
}
}
static void writefile(){
Scanner s=new Scanner(System.in);
FileOutputStream fos = null;
try
{
fos = new FileOutputStream("a.txt");
String str="";
System.out.println("Enter the File Input:");
str=s.nextLine();
fos.write(str.getBytes());
}
catch(Exception e)
{
System.out.println("error"+e);
}
finally
{
try
{
if (fos != null)
{
fos.close();
}
} catch (IOException ex)
{
```

```
System.out.println("Error closing file:" + ex.getMessage());
}
}
}
public static void main(String args[])
{
int k=0;
Scanner s = new Scanner(System.in);
while (k<2) {
System.out.println("MENU");
System.out.println("1. WRITE");
System.out.println("2.READ");
System.out.println("3.EXIT");
k=s.nextInt();
if (k==1) {
writefile();
}
else if (k==2) {
readfile();
}
}
}
}
```

OUTPUT

```
C:\devika\JAVA\Cycle 4\Filehandling>javac filehandling.java
C:\devika\JAVA\Cycle 4\Filehandling>java filehandling
MENU
1. WRITE
2.READ
3.EXIT
1
```

Enter the File Input:

Hello World

MENU

1. WRITE

2.READ

3.EXIT

3

C:\devika\JAVA\Cycle 4\Filehandling>java filehandling

MENU

1. WRITE

2.READ

3.EXIT

2

file size is 11

72

101

108

108

111

32

87

111

114

108

100

```
/*Devika P Sajith
S3 CSE AI 26
Program to show try,catch,throws and finally*/
class main
{
public static void main (String args[]) {
try
{
System.out.println ("Try Block");
int a = 125 / 5;
System.out.println ("Result:" +a);
}
catch (NullPointerException e) {
System.out.println ("Catch Block");
System.out.println (e);
}
finally {
System.out.println (" Finally Block");
System.out.println ("No Exception:Finally block executed");
}
System.out.println ("Rest of the code...");
}
}
```

OUTPUT

```
java -cp /tmp/o2H2kjJ39p/main
Try Block
Result:25
Finally Block
No Exception::Finally block executed
Rest of the code...
/*Java program to for employee details
```

```
Devika P Sajith
S3 CSE-AI 26*/
import java.util.*;

class employee {
   int age;
   long phone;
   String name, address;
   double salary;

   void printSal() {
      System.out.println("Salary: " + salary);
   }
}

class officer extends employee {
   String special;
}

class manager extends employee {
   String dep;
}

class print {
   public static void main(String[] args) {
      Scanner s = new Scanner(System.in);

      officer a = new officer();
      manager b = new manager();

      System.out.println("Enter the Officer's details");
      System.out.println("Enter The Name:");
      a.name = s.nextLine();
```

```
System.out.println("Enter the Age:");
a.age = s.nextInt();
System.out.println("Enter the address:");
s.nextLine();
a.address = s.nextLine();
System.out.println("Enter the phone number:");
a.phone = s.nextLong();
System.out.println("Enter the salary:");
a.salary = s.nextDouble();
System.out.println("Enter the Specialization:");
s.nextLine();
a.special = s.nextLine();

System.out.println("Enter the Manager's details");
System.out.println("Enter The Name:");
b.name = s.nextLine();
System.out.println("Enter the Age:");
b.age = s.nextInt();
System.out.println("Enter the address:");
s.nextLine();
b.address = s.nextLine();
System.out.println("Enter the phone number:");
b.phone = s.nextLong();
System.out.println("Enter the salary:");
b.salary = s.nextDouble();
System.out.println("Enter the Department:");
s.nextLine();
b.dep = s.nextLine();

System.out.println("The details of the officer are:");
System.out.println("Name:\t" + a.name);
System.out.println("Age:\t" + a.age);
System.out.println("Address:\t" + a.address);
```

```
        System.out.println("Phone number:\t" + a.phone);
        a.printSal();
        System.out.println("Specialization:\t" + a.special);

        System.out.println("The details of the Manager are:");
        System.out.println("Name:\t" + b.name);
        System.out.println("Age:\t" + b.age);
        System.out.println("Address:\t" + b.address);
        System.out.println("Phone number:\t" + b.phone);
        b.printSal();

        System.out.println("Department:\t" + b.dep);
    }
}
```

OUTPUT

```
PS C:\Users\devik\javafiles> javac EMPLOYEE.java
PS C:\Users\devik\javafiles> java print
Enter the Officer's details
Enter The Name:
JOHN
Enter the Age:
32
Enter the address:
BALAJI HOUSE
Enter the phone number:
456768799
Enter the salary:
363738
Enter the Specialization:
AI
Enter the Manager's details
Enter The Name:
MANASA
```

Enter the Age:

23

Enter the address:

GANDHI NAGAR

Enter the phone number:

456778999

Enter the salary:

40000

Enter the Department:

AI

The details of the officer are:

Name: JOHN

Age: 32

Address: BALAJI HOUSE

Phone number: 456768799

Salary: 363738.0

Specialization: AI

The details of the Manager are:

Name: MANASA

Age: 23

Address: GANDHI NAGAR

Phone number: 456778999

Salary: 40000.0

Department: AI