

### Assignment 01 : WAP to Check whether given matrix is symmetric or not

Code :

```
import java.util.Scanner;

public class aSymmetricMatrix {

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        int m, n;

        System.out.println("Enter the dimensions of array : ");

        System.out.print("Enter the number of rows : ");

        m = sc.nextInt();

        System.out.print("Enter the number of columns : ");

        n = sc.nextInt();

        int arr[][];

        arr = new int[m][n];

        int i,j,flag = 0;

        String remk = "Input matrix is a square matrix and the transpose of matrix is equivalent to input matrix!";

        if(m==n){

            System.out.println("Enter the elements of matrix [][] : ");

            for(i=0; i<m; i++){

                for(j=0; j<n; j++){

                    System.out.print("Enter value at arr["+i+"]["+j+"] : ");

                    arr[i][j] = sc.nextInt();

                    sc.nextLine();

                }

            }

        }

    }

}
```

```

    }
}

System.out.println("The input matrix is : ");

for(int x[]:arr){
    for(int y:x){
        System.out.print(y);
    }
    System.out.println();
}

for(i=0; i<m; i++){
    for(j=0; j<n; j++){
        if(arr[i][j]==arr[j][i] || i==j){
            flag = 1;
        }
        else{
            flag = 0;
            remk = "As the transpose is not equivalent to original matrix!";
            break;
        }
    }
}

else{
    flag = 0;
    remk = "As its not a square matrix!";
}

if(flag==1){

```

```
System.out.println("The matrix is Symmetric!");
System.out.println(remk);
System.out.println("Transpose of matrix is : ");
for(i=0; i<m; i++){
    for(j=0; j<n; j++){
        System.out.print(arr[j][i]);
    }
    System.out.println();
}
}
else{
    System.out.println("The matrix is not Symmetric!");
    System.out.println(remk);
    System.out.println("Transpose of matrix is : ");
    for(i=0; i<m; i++){
        for(j=0; j<n; j++){
            System.out.print(arr[j][i]);
        }
        System.out.println();
    }
}
sc.close();
}
```

## Output:

```
Enter the dimensions of array :
Enter the number of rows : 3
Enter the number of columns : 3
Enter the elements of matrix [][] :
Enter value at arr[0][0] : 1
Enter value at arr[0][1] : 2
Enter value at arr[0][2] : 3
Enter value at arr[1][0] : 2
Enter value at arr[1][1] : 4
Enter value at arr[1][2] : 5
Enter value at arr[2][0] : 3
Enter value at arr[2][1] : 5
Enter value at arr[2][2] : 6
The input matrix is :
123
245
356
The matrix is Symmetric!
Input matrix is a square matrix and the transpose of matrix is equivalent to input matrix!
Transpose of matrix is :
123
245
356
```

```
Enter the dimensions of array :
Enter the number of rows : 3
Enter the number of columns : 4
The matrix is not Symmetric!
As its not a square matrix!
```

```
Enter the dimensions of array :
Enter the number of rows : 3
Enter the number of columns : 3
Enter the elements of matrix [][] :
Enter value at arr[0][0] : 1
Enter value at arr[0][1] : 2
Enter value at arr[0][2] : 3
Enter value at arr[1][0] : 4
Enter value at arr[1][1] : 5
Enter value at arr[1][2] : 6
Enter value at arr[2][0] : 7
Enter value at arr[2][1] : 8
Enter value at arr[2][2] : 9
The input matrix is :
123
456
789
The matrix is not Symmetric!
As the transpose is not equivalent to original matrix!
Transpose of matrix is :
147
258
369
```



## Assignment 02 : WAP to find the product of 2 matrix

### Code:

```
import java.util.Scanner;

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

        int m, n, o, p, i, j, k, res=0;

        System.out.println("Enter the dimensions of 1st matrix : ");
        System.out.print("Enter the number of rows : ");
        m = sc.nextInt();
        System.out.print("Enter the number of columns : ");
        n = sc.nextInt();

        System.out.println("Enter the dimensions of 2nd matrix : ");
        System.out.print("Enter the number of rows : ");
        o = sc.nextInt();
        System.out.print("Enter the number of columns : ");
        p = sc.nextInt();

        int arr1[][];
        arr1 = new int[m][n];

        int arr2[][];
        arr2 = new int[o][p];
```

```
if(n==0){  
int arr3 [][];  
arr3 = new int[m][p];
```

```
System.out.println("Enter the elements of 1st matrix [][] : ");  
for(i=0; i<m; i++){  
for(j=0; j<n; j++){  
System.out.print("Enter value at arr["+i+"]["+j+"] : ");  
arr1[i][j] = sc.nextInt();  
sc.nextLine();  
}  
}
```

```
System.out.println("Enter the elements of 2nd matrix [][] : ");  
for(i=0; i<o; i++){  
for(j=0; j<p; j++){  
System.out.print("Enter value at arr["+i+"]["+j+"] : ");  
arr2[i][j] = sc.nextInt();  
sc.nextLine();  
}  
}
```

```
System.out.println("The 1st matrix is : ");  
for(int x[]:arr1){  
for(int y:x){  
System.out.print(y+" ");
```

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

```
System.out.println("The 2nd matrix is : ");
```

```
for(int x[:arr2){  
    for(int y:x){  
        System.out.print(y+" ");  
    }  
    System.out.println();  
}  
for(i = 0; i<m; i++){  
    for(j=0; j<p; j++){  
        for(k=0; k<o; k++){  
            res = res + (arr1[i][k]*arr2[k][j]);  
        }  
        arr3 [i][j] = res;  
        res = 0;  
    }  
    res = 0;  
}
```

```
System.out.println("The product of matrix 1 & matrix 2 is : ");
```

```
for(int x[:arr3){  
    for(int y: x){  
        System.out.print(y+" ");  
    }  
}
```



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

```
}
```

```
}
```

```
else{
```

```
System.out.println("Product of matrices is not possible as the number of columns of 1st matrix is  
not equivalent to number of rows of 2nd matrix!");
```

```
}
```

```
sc.close();
```

```
}
```

```
}
```

## Output :

```
Enter the dimensions of 1st matrix :
Enter the number of rows : 2
Enter the number of columns : 3
Enter the dimensions of 2nd matrix :
Enter the number of rows : 3
Enter the number of columns : 2
Enter the elements of 1st matrix [][] :
Enter value at arr[0][0] : 1
Enter value at arr[0][1] : 2
Enter value at arr[0][2] : 3
Enter value at arr[1][0] : 4
Enter value at arr[1][1] : 5
Enter value at arr[1][2] : 6
Enter the elements of 2nd matrix [][] :
Enter value at arr[0][0] : 7
Enter value at arr[0][1] : 8
Enter value at arr[1][0] : 9
Enter value at arr[1][1] : 10
Enter value at arr[2][0] : 11
Enter value at arr[2][1] : 12
The 1st matrix is :
1 2 3
4 5 6
The 2nd matrix is :
7 8
9 10
11 12
The product of matrix 1 & matrix 2 is :
58 64
139 154
```

```
Enter the dimensions of 1st matrix :
Enter the number of rows : 3
Enter the number of columns : 2
Enter the dimensions of 2nd matrix :
Enter the number of rows : 3
Enter the number of columns : 2
Product of matrices is not possible as the number of columns of 1st matrix is not equivalent to number of rows of 2nd matrix!
```

### **Assignment 03 : WAP to check whether a given matrix is upper triangular or not**

**Code:**

```
import java.util.Scanner;

public class cUppertriangularMatrix {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int arr[][];

        System.out.print("Enter the number of rows in matrix : ");
        int m = sc.nextInt();
        sc.nextLine();
        System.out.print("Enter the number of columns in matrix : ");
        int n = sc.nextInt();
        sc.nextLine();

        if(m==n){
            int i,j,flag = 0;
            arr = new int[m][n];
            System.out.println("Enter the elements of matrix : ");
            for(i=0; i<m; i++){
                for(j=0; j<n; j++){
                    System.out.printf("Value at arr[%d][%d] : ",i,j);
                    arr[i][j] = sc.nextInt();
                    sc.nextLine();
                }
            }
        }
    }
}
```

```
}  
}
```

```
System.out.println("The matrix is : ");
```

```
for(int x[]: arr){
```

```
for(int y: x){
```

```
System.out.print(y+" ");
```

```
}
```

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

```
}
```

```
for(i=0; i<m; i++){
```

```
for(j=0; j<n; j++){
```

```
if(i>j){
```

```
if(arr[i][j]==0){
```

```
flag = 1;
```

```
}
```

```
else{
```

```
flag = 0;
```

```
break;
```

```
}
```

```
}
```

```
}
```

```
}
```

```
if (flag == 1){
```

```
System.out.println("The above matrix is an upper triangular matrix!");
```

```
}
```

```
else{
```

```
System.out.println("The above matrix is not an upper triangular matrix not all elements  
below diagonal are zeros!");
```

```
}
```

```
}
```

```
else{
```

```
System.out.println("The above matrix is not an upper triangular matrix, as its not a  
square matrix!");
```

```
}
```

```
sc.close();
```

```
}
```

```
}
```

## Output:

```
Enter the number of rows in matrix : 3
Enter the number of columns in matrix : 3
Enter the elements of matrix :
Value at arr[0][0] : 1
Value at arr[0][1] : 2
Value at arr[0][2] : 3
Value at arr[1][0] : 0
Value at arr[1][1] : 4
Value at arr[1][2] : 5
Value at arr[2][0] : 0
Value at arr[2][1] : 0
Value at arr[2][2] : 6
The matrix is :
1 2 3
0 4 5
0 0 6
The above matrix is an upper triangular matrix!
```

```
Enter the number of rows in matrix : 3
Enter the number of columns in matrix : 3
Enter the elements of matrix :
Value at arr[0][0] : 1
Value at arr[0][1] : 2
Value at arr[0][2] : 3
Value at arr[1][0] : 0
Value at arr[1][1] : 4
Value at arr[1][2] : 5
Value at arr[2][0] : 0
Value at arr[2][1] : 6
Value at arr[2][2] : 7
The matrix is :
1 2 3
0 4 5
0 6 7
The above matrix is not an upper triangular matrix not all elements below diagonal are zeros!
```

```
Enter the number of rows in matrix : 3
Enter the number of columns in matrix : 4
The above matrix is not an upper triangular matrix, as its not a square matrix!
```

#### **Assignment 04 : WAP to print Pascals Triangle up to n rows**

##### **Codes:**

```
import java.util.Scanner;

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

        int n;
        System.out.print("Enter the number of rows for Pascals Triangle : ");
        n = sc.nextInt();
        sc.nextLine();

        if(n>=0){
            int i =0, j=0, sp=0, num=1;
            System.out.printf("Pascals Triangle up to %d row is : \n",n);
            while(i<=n){
                while(sp<=(n-i)){
                    System.out.print(" ");
                    sp++;
                }
                num=1;
                j=0;
                while(j<=i){
                    System.out.print(num+" ");
```

```
num = num*(i-j)/(j+1);  
j++;  
}  
System.out.println();  
i++;  
j=0;  
sp=0;  
}  
}  
else{  
System.out.println("Can't print Pascals Triangle because row number must be non-negative!");  
}  
sc.close();  
}  
}
```



**Output:**

```
Enter the number of rows for Pascals Triangle : 4
Pascals Triangle up to 4 row is :
      1
     1 1
    1 2 1
   1 3 3 1
  1 4 6 4 1
```

```
Enter the number of rows for Pascals Triangle : -1
Can't print Pascals Triangle because row number must be non-negative!
```

### **Assignment 05 : WAP to find sum of first n natural numbers using recursion**

#### **Code:**

```
import java.util.Scanner;

public class eSumOfNnaturalNumbersRecursion {
    public static int sum(int n){
        if(n==1){
            return 1;
        }
        else{
            return n+sum(n-1);
        }
    }

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);
        System.out.print("Enter the value of natural number : ");
        int num = sc.nextInt();
        sc.nextLine();

        if(num>0){
            System.out.printf("Sum natural numbers up to %d is : ",num);
            int res = sum(num);
            System.out.print(res+"\n");
        }
        else{
```

```
System.out.println("Entered number is not a natural number!");  
}  
sc.close();  
}  
}
```

**Output:**

```
Enter the value of natural number : 6
Sum natural numbers up to 6 is : 21
```

```
Enter the value of natural number : 0
Entered number is not a natural number!
```

**Assignment 06 : WAP to count the number of digits in a given number by defining a method countDigit(n);**

**Code :**

```
import java.util.Scanner;

public class fCountDigits {
    public static int countDigit(int n){
        int numDigits = 0;
        while(n>0){
            numDigits++;
            n /= 10;
        }
        return numDigits;
    }

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter a number to count its total digits : ");

        int num = sc.nextInt();
        sc.nextLine();

        int res = 0;
        if(num>0){
            res = countDigit(num);
            System.out.printf("The number of digits in %d are : %d \n",num,res);
        }
    }
}
```

```
}  
else if(num<0){  
    int newnum = -num;  
    res = countDigit(newnum);  
    System.out.printf("The number of digits in %d are : %d \n",num,res);  
}  
else{  
    res = 1;  
    System.out.printf("The number of digits in %d are : %d \n",num,res);  
}  
  
sc.close();  
}  
}
```

**Output:**

```
Enter a number to count its total digits : 369  
The number of digits in 369 are : 3
```

```
Enter a number to count its total digits : -13  
The number of digits in -13 are : 2
```

```
Enter a number to count its total digits : 0  
The number of digits in 0 are : 1
```

**Assignment 07 : WAP to find the sum of two matrices using methods.. readMatrix,  
printMatrix , findSum**

**Code:**

```
import java.util.Scanner;

public class gReadAddPrintSumMatrix {

    public static int[][] readMatrix(int rows, int cols){
        Scanner sc = new Scanner(System.in);
        int a[][];
        a = new int[rows][cols];
        for(int i=0; i<rows; i++){
            for(int j=0; j<cols; j++){
                System.out.printf("Value at arr[%d][%d] : ",i,j);
                a[i][j] = sc.nextInt();
                sc.nextLine();
            }
        }
        return a;
    }

    public static void printMatrix(int[][] a){
        for(int x[]: a){
            for(int y: x){
                System.out.print(y+" ");
            }
        }
    }
}
```



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

```
public static int [][] sumMatrix(int rows, int cols, int [][]a1, int [][]a2){  
    int a3[][];  
    a3 = new int[rows][cols];  
    for(int i=0; i<rows; i++){  
        for(int j=0; j<cols; j++){  
            a3[i][j]= (a1[i][j]+a2[i][j]);  
        }  
    }  
    return a3;  
}
```

```
public static void main(String[] args) {  
    Scanner sc = new Scanner(System.in);  
  
    System.out.print("Enter the number of rows in 1st matrix : ");  
    int r1 = sc.nextInt();  
    sc.nextLine();  
    System.out.print("Enter the number of cols in 1st matrix : ");  
    int c1 = sc.nextInt();  
    sc.nextLine();  
    System.out.print("Enter the number of rows in 2nd matrix : ");  
    int r2 = sc.nextInt();
```

```
sc.nextLine();

System.out.print("Enter the number of cols in 2nd matrix : ");

int c2 = sc.nextInt();

sc.nextLine();


if(r1==r2 && c1==c2){

//Input of 2 matrix

System.out.println("Enter the elements in matrix 1 : ");

int arr1[][];

arr1 = new int [r1][c1];

arr1 = readMatrix(r1, c1);

System.out.println("Enter the elements in matrix 2 : ");

int arr2[][];

arr2 = new int [r2][c2];

arr2 = readMatrix(r2, c2);


//Displaying 2 matrices which have been taken as input

System.out.println("Matrix 1 : ");

printMatrix(arr1);

System.out.println("Matrix 2 : ");

printMatrix(arr2);


//Displaying addition of both input matrices

int arr3[][];

arr3 = new int[r1][c1];

arr3 = sumMatrix(r1, c1, arr1, arr2);

System.out.println("Sum of Matrix 1 and Matrix 2 is : ");
```

```
printMatrix(arr3);  
}  
else{  
    System.out.println("Cannot perform addition of these 2 matirx as their number of rows and  
    columns aren't equal!");  
}  
  
sc.close();  
}  
}
```

## Output:

```
Enter the number of rows in 1st matrix : 2
Enter the number of cols in 1st matrix : 3
Enter the number of rows in 2nd matrix : 2
Enter the number of cols in 2nd matrix : 3
Enter the elements in matrix 1 :
Value at arr[0][0] : 1
Value at arr[0][1] : 2
Value at arr[0][2] : 3
Value at arr[1][0] : 4
Value at arr[1][1] : 5
Value at arr[1][2] : 6
Enter the elements in matrix 2 :
Value at arr[0][0] : 1
Value at arr[0][1] : 2
Value at arr[0][2] : 3
Value at arr[1][0] : 4
Value at arr[1][1] : 5
Value at arr[1][2] : 6
Matrix 1 :
1 2 3
4 5 6
Matrix 2 :
1 2 3
4 5 6
Sum of Matrix 1 and Matrix 2 is :
2 4 6
8 10 12
```

```
Enter the number of rows in 1st matrix : 2
Enter the number of cols in 1st matrix : 2
Enter the number of rows in 2nd matrix : 2
Enter the number of cols in 2nd matrix : 2
Enter the elements in matrix 1 :
Value at arr[0][0] : 1
Value at arr[0][1] : 2
Value at arr[1][0] : 3
Value at arr[1][1] : 4
Enter the elements in matrix 2 :
Value at arr[0][0] : 1
Value at arr[0][1] : 2
Value at arr[1][0] : 3
Value at arr[1][1] : 4
Matrix 1 :
1 2
3 4
Matrix 2 :
1 2
3 4
Sum of Matrix 1 and Matrix 2 is :
2 4
6 8
```

```
Enter the number of rows in 1st matrix : 2
Enter the number of cols in 1st matrix : 2
Enter the number of rows in 2nd matrix : 3
Enter the number of cols in 2nd matrix : 3
Cannot perform addition of these 2 matrix as their number of rows and columns aren't equal!
```

**Assignment 08 : WAP to define findArea method using method overloading, square, rectangle, circle pi, side**

**Code:**

```
import java.util.Scanner;
```

```
class AreaOfFig{  
    public float area(float s){  
        return (s*s);  
    }  
    public float area(float a, float b){  
        return (a*b);  
    }  
    public double area(double r){  
        return (3.14*r*r);  
    }  
}
```

```
public class hFindAreaUsingMethodOverloading{  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        AreaOfFig AreaCal = new AreaOfFig();  
        int ch = 1;  
        do{  
            System.out.print("\n1.Find Area of Square\n2.Find Area of Rectangle\n3.Find Area of  
Square\n4.Exit\nEnter your choice : ");  
            ch = sc.nextInt();  
            sc.nextLine();
```

```
switch(ch){  
case 1:  
System.out.print("Enter the side of Square : ");  
float side = sc.nextFloat();  
sc.nextLine();  
float AreaSquare = AreaCal.area(side);  
System.out.printf("Area of Square with side %f is %f sq.units. \n",side,AreaSquare);  
break;  
case 2:  
System.out.print("Enter the length of Rectangle : ");  
float leng = sc.nextFloat();  
sc.nextLine();  
System.out.print("Enter the breadth of Rectangle : ");  
float brea = sc.nextFloat();  
sc.nextLine();  
float AreaRectangle = AreaCal.area(leng,brea);  
System.out.printf("Area of Rectangle with length %f and breadth %f is %f sq.units. \n",leng,  
brea,AreaRectangle);  
break;  
case 3:  
System.out.print("Enter the radius of circle : ");  
double radius = sc.nextDouble();  
sc.nextLine();  
double AreaCircle = AreaCal.area(radius);  
System.out.printf("Area of Circle with radius %f is %f sq.units. \n",radius,AreaCircle);  
break;
```

```
case 4:
System.out.println("Exiting the program!");
break;
default:
System.out.println("Invalid Input! Please Try Again!");
}
}
while(ch!=4);
sc.close();
}
}
```

## Output:

```
1.Find Area of Square
2.Find Area of Rectangle
3.Find Area of Square
4.Exit
Enter your choice : 1
Enter the side of Square : 2
Area of Square with side 2.000000 is 4.000000. sq.units.

1.Find Area of Square
2.Find Area of Rectangle
3.Find Area of Square
4.Exit
Enter your choice : 2
Enter the length of Rectangle : 3
Enter the breadth of Rectangle : 6
Area of Rectangle with length 3.000000 and breadth 6.000000 is 18.000000 sq.units.

1.Find Area of Square
2.Find Area of Rectangle
3.Find Area of Square
4.Exit
Enter your choice : 3
Enter the radius of circle : 3
Area of Circle with radius 3.000000 is 28.260000 sq.units.

1.Find Area of Square
2.Find Area of Rectangle
3.Find Area of Square
4.Exit
Enter your choice : 5
Invalid Input! Please Try Again!

1.Find Area of Square
2.Find Area of Rectangle
3.Find Area of Square
4.Exit
Enter your choice : 4
Exiting the program!
```



**Assignment 09 : WAP to find the average of numbers using variable length argument method**

**Code :**

```
import java.util.Scanner;

public class iAvgOfNumUsingVariableLengMethod{
    public static double avg(int totalNum ,double... num){
        double sum = 0;
        for(double x: num){
            sum += x;
        }
        double res = (sum/totalNum);
        return res;
    }

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

        System.out.print("Enter the total numbers for avg : ");
        int t = sc.nextInt();
        sc.nextLine();

        double arr[];
        arr = new double[t];

        System.out.println("Enter the numbers : ");
        for(int i=0; i<t; i++){
```

```

arr[i] = sc.nextDouble();
sc.nextLine();
}

System.out.print("The average of : ");
for(double x: arr){
System.out.print(x+" ");
}
double avgofall = avg(t,arr);
System.out.printf("is : %f \n",avgofall);
sc.close();
}
}

```

**Output:**

```

Enter the total numbers for avg : 6
Enter the numbers :
1
2
3
4
5
6
The average of : 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, is : 3.500000

```

**Assignment 10 : Java Program to demonstrate the working of a banking-system, where we deposit and withdraw amount from our account, Creating an Account class which has deposit() and withdraw() methods**

**Code:**

```
import java.util.Scanner;

class Acc{
    private int accNo;
    private String accName;
    private double accBal;

    public void depo(double amt){
        accBal += amt;
        System.out.println("The account Number "+accNo+" has been deposited an amount of Rs. "+amt
        +". The net balance is "+accBal);
    }

    public void witd(double amt){
        if(accBal<=1000 || (amt+1000>accBal)){
            System.out.println("Insufficient balance");
        }
        else{
            accBal -= amt;
            System.out.println("The account Number "+accNo+" has withdrew an amount of Rs. "+amt
            +". The balance is "+accBal);
        }
    }

    public void checkBalance() {
        System.out.println("Your balance is: " + accBal);
    }

    public void openAcc(String accName, int accNo, double accBal){
        this.accName = accName;
        this.accNo = accNo;
        this.accBal = accBal;
    }

    @Override
    public String toString(){// in this class when you pass object we want this to happen always
        return "Account Holder data : [Account name : "+accName+"] [Account number : "+ accNo + "]
        [Account Balance : "+accBal+"] ";
    }
}
```

```
}  
}
```

```
public class jBank {  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);
```

```
        Acc account = new Acc();  
        int ch = 1;
```

```
        String name="";  
        int anum=1;  
        double amts=1000;
```

```
        do{  
            System.out.print("\nBanking System Menu\n1.Create  
Account\n2.Deposit\n3.Withdraw\n4.Check-Balance\n5.Exit\nEnter your choice :");  
            ch = sc.nextInt();  
            sc.nextLine();
```

```
            switch(ch){  
                case 1:  
                    System.out.println("New Account Menu");  
                    System.out.print("Enter you name : ");  
                    name = sc.nextLine();  
                    System.out.print("Enter you account number : ");  
                    anum = sc.nextInt();  
                    sc.nextLine();  
                    System.out.print("Deposit balance >=1000: ");  
                    amts = sc.nextDouble();  
                    sc.nextLine();  
                    account.openAcc(name,anum,amts);  
                    System.out.print(account);  
                    break;
```

```
                case 2:  
                    System.out.println("Deposit Menu");  
                    System.out.print("Enter you account number : ");  
                    anum = sc.nextInt();  
                    sc.nextLine();
```

```
System.out.print("Enter Deposit amt : ");
amts = sc.nextDouble();
sc.nextLine();
account.depo(amts);
System.out.print(account);
break;
```

```
case 3:
System.out.println("Withdraw Menu");
System.out.print("Enter you account number : ");
anum = sc.nextInt();
sc.nextLine();
System.out.print("Enter Withdrawal amt : ");
amts = sc.nextDouble();
sc.nextLine();
account.witd(amts);
System.out.print(account);
break;
```

```
case 4:
System.out.println("Check-Balance Menu");
System.out.print("Enter you account number : ");
anum = sc.nextInt();
sc.nextLine();
account.checkBalance();
System.out.print(account);
break;
```

```
case 5:
System.out.print(account);
System.out.println("Exiting the Banking System");
break;
```

```
default:
System.out.println("Invalid Input! Please Try Again!");
}
}
while(ch!=5);
sc.close();
}
```

}

## Output:

```
Banking System Menu
1.Create Account
2.Deposit
3.Withdraw
4.Check-Balance
5.Exit
Enter your choice :1
New Account Menu
Enter you name : Utkarsh
Enter you account number : 101
Deposit balance >=1000: 1100
Account Holder data : [Account name : Utkarsh] [Account number : 101] [Account Balance : 1100.0]
Banking System Menu
1.Create Account
2.Deposit
3.Withdraw
4.Check-Balance
5.Exit
Enter your choice :2
Deposit Menu
Enter you account number : 101
Enter Deposit amt : 1000
The account Number 101 has been deposited an amount of Rs. 1000.0. The net balance is 2100.0
Account Holder data : [Account name : Utkarsh] [Account number : 101] [Account Balance : 2100.0]
Banking System Menu
1.Create Account
2.Deposit
3.Withdraw
4.Check-Balance
5.Exit
Enter your choice :3
Withdraw Menu
Enter you account number : 101
Enter Withdrawal amt : 100
The account Number 101 has withdrawn an amount of Rs. 100.0. The balance is 2000.0
Account Holder data : [Account name : Utkarsh] [Account number : 101] [Account Balance : 2000.0]
Banking System Menu
1.Create Account
2.Deposit
3.Withdraw
4.Check-Balance
5.Exit
Enter your choice :4
Check-Balance Menu
Enter you account number : 101
Your balance is: 2000.0
Account Holder data : [Account name : Utkarsh] [Account number : 101] [Account Balance : 2000.0]
Banking System Menu
1.Create Account
2.Deposit
3.Withdraw
4.Check-Balance
5.Exit
Enter your choice :6
Invalid Input! Please Try Again!
```

```
Banking System Menu
1.Create Account
2.Deposit
3.Withdraw
4.Check-Balance
5.Exit
Enter your choice :5
Account Holder data : [Account name : Utkarsh] [Account number : 101] [Account Balance : 2000.0] Exiting the Banking System
```