Assignment:

1.import java.util.*;

```
class Height
{
	private int feet;
	private int inches;

	public void getDistance()
	{
		Scanner sc=new Scanner(System.in);

		System.out.print("Enter feet: ");
		feet=sc.nextInt();
		System.out.print("Enter inches: ");
		inches=sc.nextInt();
	}
	public void showDistance()
	{
		System.out.println("Feet: "+ feet + "\tInches: "+ inches);
	}

	public void addDistance(Height H1, Height H2)
	{
		inches=H1.inches+H2.inches;
```

```
                feet=H1.feet+H2.feet+(inches/12);
                inches=inches% 12;
        }
}

public class Main
{
        public static void main(String []s)
        {
                try
                {

                        Height H1=new Height();
                        Height H2=new Height();
                        Height H3=new Height();

                        //read first Height
                        System.out.println("Author:T.vyjayanthi \nSAP ID:51834774");
                        System.out.println("Enter first Height: ");
                        H1.getDistance();

                        //read second Height
                        System.out.println("Enter second Height: ");
                        H2.getDistance();
```

```
                    //add heights
                    H3.addDistance(H1,H2);
                    //print Height
                    System.out.println("Total Height is:" );
                    H3.showDistance();
                }
                catch (Exception e)
                {
                    System.out.println("Exception occurred :"+ e.toString());
                }
        }
}

2.abstract class Furniture {

 protected String color;
 protected int width;
 protected int height;
 public abstract void accept();
 public abstract void display();
}
   class chair extends Furniture {
 private int numOf_legs;

 public void accept() {
```

```
 color = "Brown";
 width = 36;
 height = 48;
 numOf_legs = 4;
}
  public void display()   {
 System.out.println("DISPLAYING VALUE FOR CHAIR");
 System.out.println("================================");
 System.out.println("Color is" + color);
 System.out.println("Width is" + width);
 System.out.println("Height is" + height);
 System.out.println("Number of legs is" + numOf_legs);
 System.out.println(" ");
 }
}

class Bookshelf extends Furniture {

 private int numOf_shelves;

 public void accept()  {

  color ="Black";
  width = 72;
```

```
 height = 84;
 numOf_shelves = 4;
}
public void display () {
 System.out.println("DISPLAYING VALUES FOR BOOKSHELF");
 System.out.println
("==================================");

System.out.println("Color is" + color);
System.out.println("Width is" + width);
System.out.println("Height is" + height);
System.out.println("Number of shelves is" + numOf_shelves);
System.out.println(" ");
}
}

class FurnitureDemo {
public static void main(String[] args) {
 Bookshelf b1 = new Bookshelf();
 b1.accept();
 b1.display();


 chair c1 = new chair ();
 c1.accept();
```

```
  c1.display();


 }
 }
```

3.

```
import java.util.*;

class Main
{
        public static int[] remove(int[] x, int key) {

                List<Integer> result = new ArrayList<>();

                for (int y: x) {
                        if (y != key) {
                                result.add(y);
                        }
                }

                return result.stream()
                                        .mapToInt(Integer::intValue)
                                        .toArray();
        }

        public static void main(String[] args) {
```

```
                int[] x = { 1, 4, 1, 3, 1, 2, 1, 0 };
                int key = 1;

                x = remove(x, key);
                System.out.println("Author:T.vyjayanthi \nSAP ID:51834774");
                System.out.println(Arrays.toString(x));
        }
}
```

4.

```
public class Main
{
        public static void main(String[] args)
        {
           int i,j,k;
           for(i=1;i<=5;i++)
           {
              for(j=5;j>i;j--)
              {
                 System.out.print(" ");
              }
              if(i% 2!=0)
              {
                 for(j=1,k=1;j<=2*i-1;j++)
                 {
                    if(j<i)
```

```
        {
            System.out.print(k);
            k++;
        }
        else
        {
            System.out.print(k);
            k--;
        }
    }
}
else
{
    for(j=1,k=i;j<=2*i-1;j++)
    {
        if(j<i)
        {
            System.out.print(k);
            k--;
        }
        else
        {
            System.out.print(k);
            k++;
        }
```

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

5.

```
import java.util.Scanner;

public class DemoTranslation {
public static void main(String[] args) {
int n;
float sum;
int count;



System.out.print("\nEnter total number of terms :: ");
n = STDIN_SCANNER.nextInt();


sum = 0.0f;


count = 1;
```

```
for(int i = 1; i <= n; i++) {
sum = sum + (float)Math.pow(count, 2) / (float)Math.pow(count, 3);
count += 2;
}

System.out.printf("\nSum of the series is :: % f\n", sum);
}

public final static Scanner STDIN_SCANNER = new Scanner(System.in);
}
```