**1.Program to display the count of maximum prize**

**Code:**

class Main {

//To display the count of maximum prize

public static void main(String[] args) {

int[] prize={176,189,189,155,132};

int count=0;

int max\_prize=prize[0];

for(int i=1;i<prize.length;i++){

if(prize[i]>;max\_prize){

max\_prize=prize[i];

}

}

for(int i=0;i<prize.length;i++){

if(prize[i]==max\_prize){

count++;

}

}

System.out.println("Maximum number is "+max\_prize);

System.out.println("Maximum number is "+count);

}

}

**2.Faulty sensor detection**

**Code:**

class Program {

public static void main(String[] args) {

int[] sensors = {25,30,28,55,32, 29};

System.out.println("Temperature reading is:");

for (int i = 0; i < sensors.length; i++)

{

System.out.println("Sensor " + (i + 1) + ": " + sensors[i] + "°C");

if (sensors[i] > 50) {

System.out.println("Fault detected in the sensor " + (i + 1) + " temperature is" + sensors[i] + "°C");

}

}

}

}

**3.Generating unique ticket id**

**Code:**

import java.util.\*;

import java.util.Random;

class Program{

public static void main(String[] args) {

Scanner scanner= new Scanner(System.in);

System.out.println("Enter the customer name : ");

String customer\_name=scanner.nextLine();

if(!customer\_name.matches("[a-zA-z]+")){

System.out.println("Error:You should enter only letters.");

}else{

Random rand=new Random();

int random\_number=(rand.nextInt(9000)+1000);

System.out.println("Ticket ID : TKT-"+customer\_name+"-" +random\_number);

}

}

}

**4.Program to find number of debits**

**Code:**

class Program{

public static void main(String[] args) {

int[] arr={115,549,336,492,129,90};

int max=0;

int max\_index=0;

int count=0;

for(int i=0;i<arr.length;i++){

if(arr[i]>max){

max=arr[i];

}

if(arr[i]==max){

max\_index=i;

}

}

for(int i=max\_index+1;i<arr.length;i++){

count++;

}

System.out.println("Maximum element is : "+max);

System.out.println("Count of elements after maximum : "+count);

if(count>3){

max-=500;

}

else if(count==3){

max-=100;

}

else{

System.out.println("Number of debits : "+count);

}

System.out.println("Final maximum value : "+max);

}

}