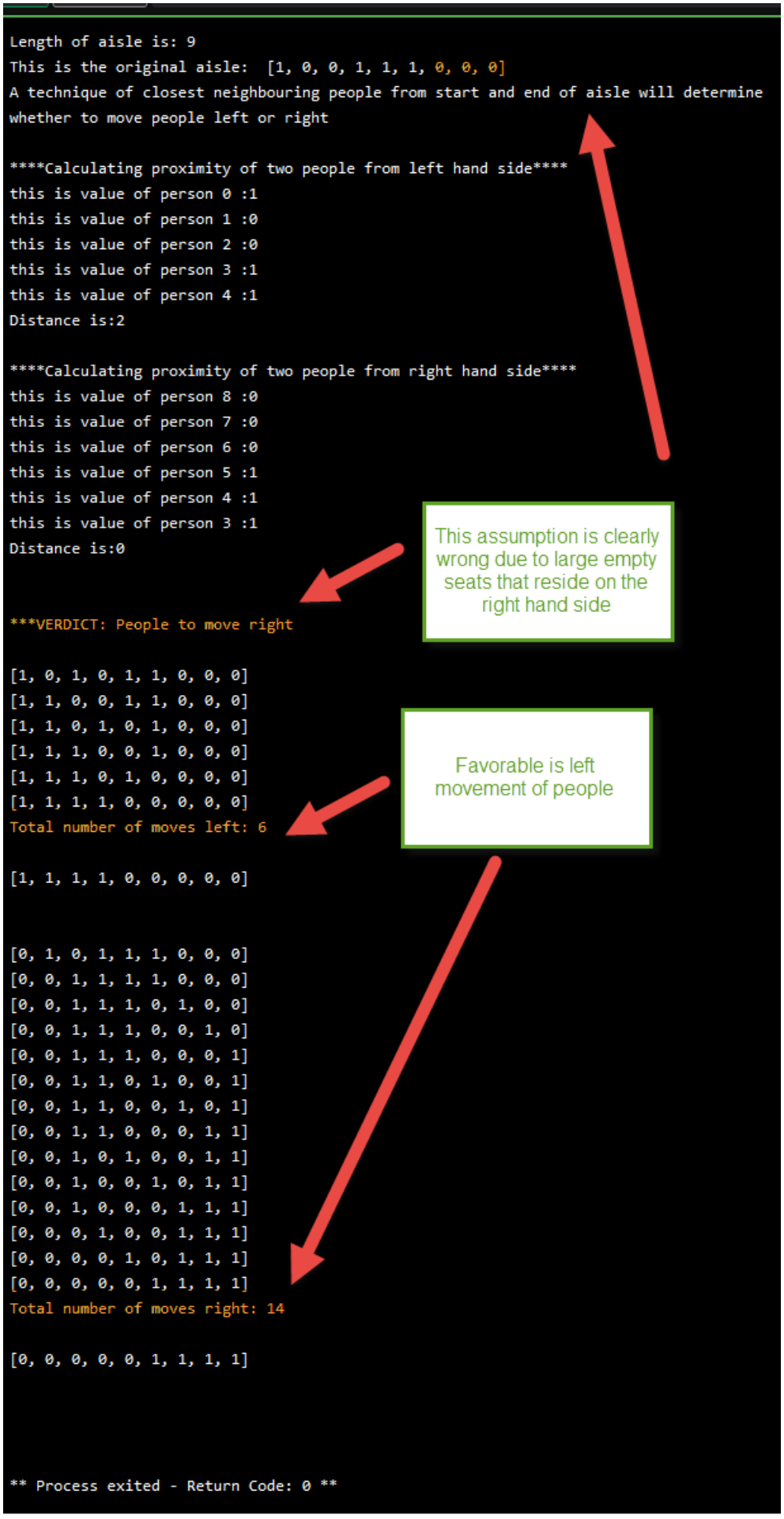
********** OUTPUT **********


Length of aisle is: 9
This is the original aisle: [1, 0, 0, 1, 1, 1, 0, 0, 0]
A technique of closest neighbouring people from start and end of aisle will determine whether to move people left or right
****Calculating proximity of two people from left hand side****
this is value of person 0 :1
this is value of person 1 :0
this is value of person 2 :0
this is value of person 3 :1
this is value of person 4 :1
Distance is:2
****Calculating proximity of two people from right hand side****
this is value of person 8 :0
this is value of person 7 :0
this is value of person 6 :0
this is value of person 5 :1
this is value of person 4 :1
this is value of person 3 :1
Distance is:0
This assumption is clearly wrong due to large empty seats that reside on the right hand side
***VERDICT: People to move right
[1, 0, 1, 0, 1, 1, 0, 0, 0]
[1, 1, 0, 0, 1, 1, 0, 0, 0]
[1, 1, 0, 1, 0, 1, 0, 0, 0]
[1, 1, 1, 0, 0, 1, 0, 0, 0]
[1, 1, 1, 0, 1, 0, 0, 0, 0]
[1, 1, 1, 1, 0, 0, 0, 0, 0]
Total number of moves left: 6
Favorable is left movement of people
[1, 1, 1, 1, 0, 0, 0, 0, 0]
[0, 1, 0, 1, 1, 1, 0, 0, 0]
[0, 0, 1, 1, 1, 1, 0, 0, 0]
[0, 0, 1, 1, 1, 0, 1, 0, 0]
[0, 0, 1, 1, 1, 0, 0, 1, 0]
[0, 0, 1, 1, 1, 0, 0, 0, 1]
[0, 0, 1, 1, 0, 1, 0, 0, 1]
[0, 0, 1, 1, 0, 0, 1, 0, 1]
[0, 0, 1, 1, 0, 0, 0, 1, 1]
[0, 0, 1, 0, 1, 0, 0, 1, 1]
[0, 0, 1, 0, 0, 1, 0, 1, 1]
[0, 0, 1, 0, 0, 0, 1, 1, 1]
[0, 0, 0, 1, 0, 0, 1, 1, 1]
[0, 0, 0, 0, 1, 0, 1, 1, 1]
[0, 0, 0, 0, 0, 1, 1, 1, 1]
Total number of moves right: 14
[0, 0, 0, 0, 0, 1, 1, 1, 1]
** Process exited - Return Code: 0 **

```
/*
Online Java - IDE, Code Editor, Compiler


Online Java is a quick and easy tool that helps you to build, compile, test your programs
online.
*/
import java.util.Arrays;


public class Main
{
   public static void main(String[] args)
   {
      shiftPeople sp = new shiftPeople();
      sp.leftOrRight();
      sp.beginMove();
   }

}


class shiftPeople
{

int count=0;
int distanceLeft=0;
int distanceRight=0;
int temp;
int pos[]=new int[3];

int[] people = new int[]{0, 0, 0, 0, 0, 0, 0, 0, 1};

int length=people.length;

public shiftPeople()

{
   System.out.println("Length of aisle is: " + length);
   System.out.println("This is the original aisle:  " + Arrays.toString(people));

   // It is realised that logic is that from LHS and RHS
   // LHS - closest distance between furthest left 1 and its closest one
   // RHS - closest distance between furthest right 1 and its closest one
   //Whichever is smallest, this is direction of movement of people.

   System.out.println("A technique of closest neighbouring people from start and end of aisle
will determine");
   System.out.println("whether to move people left or right");

   //this deals with LHS
   System.out.println("\n****Calculating proximity of two people from left hand side****");

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

```
      System.out.println("this is value of person " + i + " :" + people[i]);

      if (count==2)
      {
         break;
      }

      if (people[i]==1)
      {
         count++;
         pos[count]=i;

      }
   }


   if (count==2)
   {
   distanceLeft = pos[2]-pos[1]-1;
   System.out.println("Distance is:" + distanceLeft + "\n");
   }
   else
   {
      System.out.println("One person in the aisle");
   }



   count=0;
   System.out.println("\n****Calculating proximity of two people from right hand
side****");

   for (int i=length-1;i>-1;i--)
   {
      System.out.println("this is value of person " + i + " :" + people[i]);

      if (count==2)
      {
         break;

      }

      if (people[i]==1)
      {
         count++;
         pos[count]=i;

      }
   }



   if (count==2)
   {
   distanceLeft = pos[2]-pos[1]-1;
   System.out.println("Distance is:" + distanceRight + "\n");
```

```
    }
    else
    {
       System.out.println("One person in the aisle");
    }


}

public void leftOrRight()
{
    if (distanceLeft>distanceRight)
    {
       System.out.println("\n***VERDICT: " + "People to move right\n");
    }

    else if (distanceRight>distanceLeft)
    {
       System.out.println("\n***VERDICT: " + "People to move left\n");
    }

    else
    {
       System.out.println("\n***VERDICT: " + "no difference moving left or right\n");
    }
}



public void beginMove()

{
    int moves=0;
    int counter=0;
    int [] original = new int [length];
    System.arraycopy(people, 0, original, 0, length);

    do
    {
       for (int i=length-1;i>0;i--)
       {
          if ((people[i-1]==0) && (people[i]==1))
          {
             people[i]=0; people[i-1]=1;
             moves++;
             System.out.println(Arrays.toString(people));

          }
       }

       counter++;
       }while(counter<length-1);

       System.out.println("Total number of moves left: " + moves);
       System.out.println("\n"+Arrays.toString(people)+"\n\n");
```

```
      System.arraycopy(original, 0, people, 0, length);

      //System.out.println("original"+Arrays.toString(original));

      moves=0;
      counter=0;


      do
      {
         for (int i=0;i<length-1;i++)
         {
            if ((people[i+1]==0) && (people[i]==1))
            {
               people[i]=0;
               people[i+1]=1;
               moves++;
               System.out.println(Arrays.toString(people));

            }

         }
         counter++;

      }while(counter<length-1);

      System.out.println("Total number of moves right: " + moves);
      System.out.println("\n"+Arrays.toString(people)+"\n\n");

}
}
```