DAA LAB 9

K S PRABHATH
19BCE7564

1Q: Efficient online bet:

Code:

```
import java.util.*; import
java.lang.*;
class Main
{


  static void PrintArray(int n,int arr[])
   { for(int i = 0; i < n;
  i++)
  {
  System.out.print(arr[i] + " ");
  }
  }
```

```
  static void NumberOfSegments(ArrayList<int[]>
segments,int[] points, int s, int p)
  {
  ArrayList<int[]> pts = new ArrayList<>(),seg = new
ArrayList<>();

  for(int i = 0; i < p; i++)
  {
  pts.add(new int[]{points[i], i});
  }

  for(int i = 0; i < s; i++)
  {
  seg.add(new int[]{segments.get(i)[0], 1});

  seg.add(new int[]{segments.get(i)[1] + 1, -1});
  }

  Collections.sort(seg, (a, b) -> b[0] - a[0]);
  Collections.sort(pts, (a, b) -> a[0] - b[0]);
```

```
int count = 0; int[] ans
= new int[p];

for(int i = 0; i < p; i++)
{
int x = pts.get(i)[0];

while (seg.size() != 0 && seg.get(seg.size() - 1)[0] <=
x)
{
count += seg.get(seg.size() - 1)[1];
seg.remove(seg.size() - 1);
}
ans[pts.get(i)[1]] = count;
}

PrintArray(p, ans);
}

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

```
    ArrayList<int[]>seg = new ArrayList<>();


    seg.add(new  int[]{2,  3});
    seg.add(new  int[]{0,  5});
    seg.add(new int[]{7, 10});

    int[] point = {1, 6, 11};

    int s = seg.size();
    int p = point.length;



    NumberOfSegments(seg, point, s, p);
     }
 }
```

Output: