**Computer Science and Engineering Discipline**
**Khulna University, Khulna - 9208**
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## PROBLEM :

Example:

| $i$ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $s_i$ | 1 | 3 | 0 | 5 | 3 | 5 | 6 | 8 | 8 | 2 | 12 |
| $f_i$ | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |

## PROGRAM :

```
#include<stdio.h>

struct Activity
{
   int start, finish;
};



void maxActivity(struct Activity arr[], int n)
{


          printf("Following activities are selected\n");

   int i = 0;
   printf("%d  ",arr[i].start);
   printf("%d\n",arr[i].finish);
```

```
   for (int j = 1; j < n; j++)
   {

            if (arr[j].start>= arr[i].finish)
            {
                                printf("%d  ",arr[j].start);
                                printf("%d\n",arr[j].finish);

                                i = j;
            }
   }
}

void mergesort(int a[],int i,int j)
{
            int mid;

            if(i<j)
            {
                        mid=(i+j)/2;
                        mergesort(a,i,mid);
                        mergesort(a,mid+1,j);
                        merge(a,i,mid,mid+1,j);
            }
}

void merge(int a[],int i1,int j1,int i2,int j2)
{
            int temp[j2];
            int i,j,k;
            i=i1;
            j=i2;
            k=0;
            j1;
            j2;

            while(i<=j1 && j<=j2)
            {
                        if(a[i]<a[j])
                                    temp[k++]=a[i++];
                        else
                                    temp[k++]=a[j++];
            }

            while(i<=j1)
                        temp[k++]=a[i++];

            while(j<=j2)
                        temp[k++]=a[j++];

            for(i=i1,j=0;i<=j2;i++,j++)
                        a[i]=temp[j];
```

```
}



int main()
{
   int i,j,temp;
   int N=11;

   struct Activity arr[N];

            for(int i=0; i<=N-1; i++)
            {
                        scanf("%d",&arr[i].start);
                        scanf("%d",&arr[i].finish);
   }

  for(i = 1; i < N; i++) {
   for(j = 0; j < N - 1; j++){
     if(arr[j].finish > arr[j+1].finish)
       {

      temp = arr[j].finish;
     arr[j].finish=arr[j+1].finish;
     arr[j+1].finish=temp;
     }
   }
 }

            maxActivity(arr, N);
   return 0;
}
```

# INPUT-OPTPUT :