





```
42 void selectionsort()
43 {
44     int i,j,min,pos;
45     for(i=0;i<a.length-1;i++)
46     {
47         min=a[i];
48         pos=i;
49         for(j=i+1;j<a.length;j++)
50         {
51             if(a[j]<min)
52             {
53                 min=a[j];
54                 pos=j;
55             }
56         }
57     }
58 }
```

```
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55             }
56         }
57     }
58 }
```

```
...src RunnableExample.java ThreadJoin.java ThreadPriority.java ThreadSleep.java ThreadSync.java SortingDemo.java SearchDemo.java Treemain.java GraphDemo.java
Source History
61 void insertionsort()
62 { int i,j,newelement;
63   for(i=0;i<a.length-1;i++)
64   {
65     newelement=a[i+1];
66     j=i+1;
67     while (j>0 && a[j-1]>newelement)
68     {
69       a[j]=a[j-1];
70       j--;
71     }
72     a[j]=newelement;
73   }
74 }
```

```
DataStructures - NetBeans IDE 8.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
<default conf...
RunnableExample.java ThreadJoin.java ThreadPriority.java ThreadSleep.java ThreadSync.java SortingDemo.java SearchDemo.java Treemain.java GraphDemo.java
Source History
79 void mergesort(int start,int end)
80 {
81     if(start<end)
82     {
83         int mid=(start+end)/2;
84         mergesort(start,mid);
85         mergesort(mid+1,end);
86         merger(start,mid,end);
87     }
88 }
89
90
91
92
Output
28°C
Smoke
Search
19-11-2022 12:45
```

```
void merger(int start,int mid,int
end) {
    int temp[]=new
    int[a.length]; int i,j,index;
    i=index=start;
    j=mid+1;
```

```

while(i<=mid && j<=end)
{
    if(a[i]<a[j])
        temp[index++]=a[i++];
    else
        temp[index++]=a[j++];
}
while(i<=mid)
    temp[index++]=a[i++];
while(j<=end)
    temp[index++]=a[j++];

for (i=start;i<=end;i++)
    a[i]=temp[i];
}

void quicksort(int start,int end)
{
    int i,j,pivot;
    i=start; j=end;pivot=start;
    while(i<j)
    {
        while(a[i]<a[pivot])
            i++;

```

```

    while(a[j]>a[pivot])
        j--;
    if(i<j)
    {
        int t=a[i];
        a[i]=a[j];
        a[j]=t;
    }
}
if(i<end)
    quicksort(i+1,end);
if(start<j)
    quicksort(start,j-1);
}

void heap()
{
    int i,k,lp,temp,done=0;
    for(i=a.length-1;i>=0;i--) {
        for(k=0;k<=i;k++)
        {
            done=0;
            lp=k;
            while(lp>0 && done!=1) {
                if(a[lp]>a[lp/2])
                {

```



```

temp=a[lp];
a[lp]=a[lp/2];
a[lp/2]=temp;
lp=lp/2;
}
else
done=1;
}
}
temp=a[0];
a[0]=a[i];
a[i]=temp;
}
}

```

```

void binarysearch(int start,int end,int key)
{
    if(start<=end)
    {
        int mid=(start+end)/2;
        if(a[mid]==key)
            System.out.println("found at:"+(mid+1));

        if(key<a[mid])//left only
            binarysearch(start,mid-1,key);

        if(key>a[mid])//right only

```

```
        binarysearch(mid+1,end,key);  
    }  
    else  
        System.out.println("Not found");  
}
```