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DSA ASSIGNMENT

Question -

Write a program to implement Quick sort by selecting last element as pivot in each partition.

Code-

```
import java.io.*;
```

```
public class Quicksort{
```

```
static void swap(int[] arr, int i, int j)
```

```
{
```

```
    int temp = arr[i];
```

```
    arr[i] = arr[j];
```

```
    arr[j] = temp;
```

```
}
```

```
static int partition(int[] arr, int low, int high)
```

```
{
```

```
int pivot = arr[high];

int i = (low - 1);

for(int j = low; j <= high - 1; j++)
{

    if (arr[j] < pivot)
    {

        i++;

        swap(arr, i, j);

    }

}

swap(arr, i + 1, high);
return (i + 1);
}
```

```
static void quickSort(int[] arr, int low, int high)
```

```
{  
    if (low < high)  
    {  
        int pi = partition(arr, low, high);  
  
        quickSort(arr, low, pi - 1);  
        quickSort(arr, pi + 1, high);  
    }  
}
```

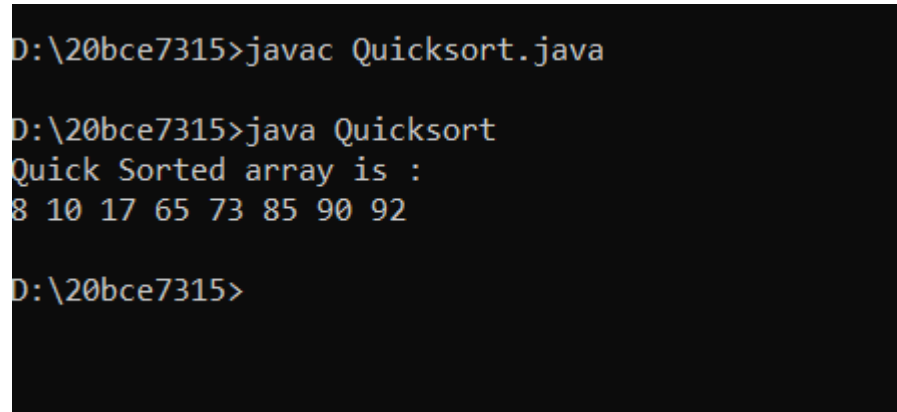
```
static void printArray(int[] arr, int size)  
{  
    for(int i = 0; i < size; i++)  
        System.out.print(arr[i] + " ");  
  
    System.out.println();  
}
```

```
public static void main(String[] args)  
{  
    int[] arr = { 10, 73, 8, 92, 17, 85, 65, 90 };
```

```
int n = arr.length;

quickSort(arr, 0, n - 1);
System.out.println("Quick Sorted array is : ");
printArray(arr, n);
}
}
```

Output-



```
D:\20bce7315>javac Quicksort.java

D:\20bce7315>java Quicksort
Quick Sorted array is :
8 10 17 65 73 85 90 92

D:\20bce7315>
```