**JOBSHEET 6**

**QUICK SORT**

**TUGAS 1**

package QuickSort;

public class Tugas01 {

public static int partition(int arr[], int L, int R)

{

int pivot = arr[R];

int i = (L-1);

for (int j=L; j<R; j++)

{

if (arr[j] <= pivot)

{

i++;

int temp = arr[i];

arr[i] = arr[j];

arr[j] = temp;

}

}

int temp = arr[i+1];

arr[i+1] = arr[R];

arr[R] = temp;

return i+1;

}

// METHOD SORT

public static void sort(int arr[], int L, int R)

{

if (L < R)

{

int pi = partition(arr, L, R);

sort(arr, L, pi-1);

sort(arr, pi+1, R);

}

}

// METHOD printArray

public static void printArray(int arr[])

{

int n = arr.length;

for (int i=0; i<n; ++i)

System.out.print(arr[i]+" ");

System.out.println("");

}

public static void main(String args[])

{

int arr[] = new int[] {10, 2, 30, 26, 45, 4, 6, 20, 22, 15};

int n = arr.length;

System.out.println("Sebelum Diurutkan");

printArray(arr);

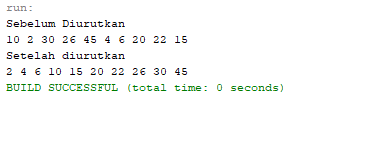
sort(arr, 0, n-1);

System.out.println("Setelah diurutkan");

printArray(arr);

}

}



**TUGAS 2**

package QuickSort;

import java.util.Random;

public class Tugas02 {

public static int[] data;

public static int partition(int arr[], int L, int R)

{

int pivot = arr[R];

int i = (L-1);

for (int j=L; j<R; j++)

{

if (arr[j] <= pivot)

{

i++;

int temp = arr[i];

arr[i] = arr[j];

arr[j] = temp;

}

}

int temp = arr[i+1];

arr[i+1] = arr[R];

arr[R] = temp;

return i+1;

}

// METHOD SORT

public static void sort(int arr[], int L, int R)

{

if (L < R)

{

int pi = partition(arr, L, R);

sort(arr, L, pi-1);

sort(arr, pi+1, R);

}

}

// METHOD printArray

public static void printArray(int arr[])

{

int n = arr.length;

for (int i=0; i<n; ++i)

System.out.print(arr[i]+" ");

System.out.println("");

}

public static void main(String args[])

{

data = new int[10];

Random acak = new Random();

int i;

for(i=0; i < 10; i++)

{

data [i] = acak.nextInt(201);

}

System.out.println("Algoritma Quicksort");

System.out.println("");

int n = data.length;

System.out.println("Sebelum Diurutkan");

printArray(data);

System.out.println("");

sort(data, 0, n-1);

System.out.println("Setelah diurutkan");

printArray(data);

}

}

