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2009022
2A
ASD2

```
Package tugas4;
Public class nomer1 {
    Public static void main(String[] args) {
        Int [] data = {25, 7, 9, 13, 3};
        for (int i=0; i<data.length; i++) {
            System.out.print (data [i]+ " ");
        }
        for (int i=1; i<data.length; i++) {
            Int key = data [i];
            Int j = i-1;
            while ((j>=0) && (data [j] > key)) {
                data [j+1] = data [j];
                j--;
            }
            data [j+1] = key;
        }
        System.out.println("Insorted by Bachtiar;");
        System.out.println("=== Insertion Sort ===");
        for (int i=0; i<data.length; i++) {
            System.out.print (data [i]+ " ");
        }
    }
}
```

```
Package tugas4;
Public class nomer4Z{
    Public static void main(String[] args ){
        Int [] data = {25, 7, 9, 13, 3};
        for (int i=0;  i < data.length; i++){
            System.out.print (data[i] + "  ");
        }
        Int k=1;
        while (k< data.length){
            Int j = data.length-1;
            while (j >=1){
                if (data [j-1] > data [j]){
                    Int temp = data [j];
                    data [j] = data [j-1];
                    data [j-1]= temp;
                }
                j = j-1;
            }
            k = k+1;
        }
        System.out.println("\nsorted by Bachtiar:");
        System.out.println("=== Bubble Sort ===");
        for (int i=0; i<data.length;  i++){
            System.out.println(data[i] + "  ");
        }
    }
}
```

```
Package tugas 9;
public class nomer 5 {
    public static void main (String [] args) {
        int [] data = {25, 37, 9, 13, 3};
        for (int i=0; i< data.length ; i++) {
            System.out.print (data [i] + " ");
        }
        for (int i=0; i<data.length - 1 ; i++) {
            int indeks kecil = i;
            for (int j=i+1; j<data.length; j++) {
                if (data [j] < ~~data~~.~~length~~ data [indeks kecil]) {
                    indeks kecil = j;
                }
            }
            int temp = data [i];
            data [i] = data [indeks kecil];
            data [indeks kecil] = temp;
        }
        System.out.println ("\nsorted by Beckliar:")
        System.out.println ("=== Selection Sort ===");
        for (int i=0; i<data.length; i++) {
            System.out.print (data [i] + " ");
        }
    }
}
```

```
Package tugas 4;
Public class nomer 4 {
    public Static Void main (String [] args ) {
        Int [] data = {25, 9, 7, 13, 3};
        print Data (data);
        Shell sort (data);
        System.out.println ("\nSorted by Bachtiar");
        Print Data (data);
    }
    Public Static Void print Data (int data []) {
        for (int i=0; i< data.length; i++) {
            System.out.print (data [i] + "  ");
        }
    }

    public Static Void Shell sort ( int [] data ) {
        Int Jarak = data.length;
        Int C = 0;
        boolean Sudah = true;
        While (Jarak >= 1) {
            Jarak = Jarak /2;
            Sudah = true;
            While (sudah) {
                Sudah = false;
                for (int j=0; j< data.length - Jarak; j++) {
                    Int i = j + Jarak;
                    C++;
                    if (data [j] > data [i]) {
                    data [i] Int temp = data [i];
                            data [j] = data [i];
                            data [i] = temp;
                            Sudah = true;
                        }
                    }
                }
            }
        }
```

```
Package tugas 4;
Import Java.util.Scanner;
Pabric class nomer 7
    public Static Void print Data (int [] data ) {
      for (int i=0; i< data.length ; i++) {
          System.out.print (data [i] + "  ");
      }
    }
    Public Static Void Selection sort (int [] data ) {
      for (int i=0; i< data.length-1; i++) {
          Int IndexSmall = i;
          for (int j= i+1 ; j <data.length; j++) {
              if (data [j] < data [IndexSmall ]) {
                  IndexSmall = j;
              }
          }
          Int temp = data [i];
          data [i] = data [IndexSmall];
          data [IndexSmall] = temp;
      }
    }
    Public Static Voi binarySearch (int [] data) {
      Int IndexAwal = 0;
      Int IndexAkhir = data.length-1;
      Int midle =0;
      Int foude :0;
      While ((Index Awal <= Index Akhir) && (foudd == 0)) {
          middle = (Index Awal + Index Akhir )/2;
          System.out.println ("nilai tengah = " + middle);
          If (key == data [middle]) {
              System.out.println ("nilai "+key+", berada di index ke-"+middle);
              foudnd = 1;
          }
          else {
              if (key <data [middle]) {
                  System.out.println ("<- kiri");
                  Index Awal = middle+1;
          }
```

```
        else {
            System.out.println("kanan ->");
            Index Awal = middle + 1;
        }
    }
}
if (found == 1){
    System.out.println("data tidak ditemukan");
}
else {
    System.out.println("data tidak ditemukan");
}
}
Public Static void main (String[] args) {
    Scanner input = new Scanner (System.in);
    int [] nilai = {25, 7, 9, 13, 3};
    System.out.println("--- before ---");
    print Data (nilai);
    Selection ~~Data~~ Sort (nilai);
    System.out.println("\n--- after ---");
    print Data (nilai);
    System.out.println("\nmasukan data yang ingin dicari ;");
    int key = input.next Int ();

    binary Search (nilai, key);
}
}
```