Bubble Sort, Selection Sort and Insertion Sort

class MyClass {  
 int[] myArray = {30,60,20,40,70,10};  
  
 void bubbleSort(){  
 int temp;  
 for(int i=0;i< myArray.length;i++){  
 for(int j=0;j<myArray.length-1-i;j++){  
 if(myArray[j+1]<myArray[j]){  
 temp = myArray[j+1];  
 myArray[j+1] = myArray[j];  
 myArray[j]=temp;  
 }  
 }  
 }  
 for(int i=0;i<myArray.length;i++){  
 System.*out*.print(myArray[i]+" ");  
 }  
  
 }  
  
 void selectionSort(){  
 int min;  
 int minIndex;  
 for(int i=0;i<myArray.length;i++){  
 min = myArray[i];  
 minIndex=i;  
  
 for(int k=0;k<myArray.length;k++){  
 System.*out*.print(myArray[k] + " -> ");  
 }  
  
 for(int j=i+1;j<myArray.length;j++){  
 if(myArray[j]<min){  
 min=myArray[j];  
 minIndex = j;  
 }  
 }  
 myArray[minIndex] = myArray[i];  
 myArray[i]= min;  
  
 System.*out*.println();  
  
 }  
 }  
  
 void insertionSort(){  
 int temp;  
 for(int i=0;i<myArray.length-1;i++){  
 temp = myArray[i+1];  
 for(int j=i;j>-1;j--){  
 if(myArray[j]>temp) {  
 for(int k=0;k<myArray.length;k++){  
 System.*out*.print(myArray[k] + " -> ");  
 }  
 myArray[j + 1] = myArray[j];  
 myArray[j] = temp;  
 System.*out*.println();  
 }  
 else{  
 break;  
 }  
 }  
 }  
  
 }  
  
 public static void main(String[] args){  
 MyClass obj = new MyClass();  
 //obj.bubbleSort();  
 //obj.selectionSort();  
 obj.insertionSort();  
 }  
}

Binary Search

class BinarySearch {  
  
 void search(int[] myArray,int data){  
 int start = 0;  
 int end = myArray.length-1;  
 int count=0;  
  
  
 while(start<=end) {  
 int mid = (start + end) / 2;  
 if (data == myArray[mid]) {  
 System.*out*.println("Data is present at Index : " + mid);  
 count=1;  
 break;  
 } else if (data < myArray[mid]) {  
 end = mid - 1;  
 } else if (data > myArray[mid]) {  
 start = mid + 1;  
 }  
 }  
 if(count==0){  
 System.*out*.println("Data not present");  
 }  
 }  
  
  
 public static void main(String[] args){  
 BinarySearch obj = new BinarySearch();  
 int[] myArray = {15,20,30,35,40,50};  
 obj.search(myArray,40);  
 }  
}

Linear Search

class LinearSearch {  
 void search(int[] arr, int data){  
 int flag=0;  
 for (int i = 0; i < arr.length; i++) {  
 if (arr[i]==data){  
 System.*out*.println("Data found at index-"+i);  
 flag= 1;  
 }  
 }  
 if (flag==0){  
 System.*out*.println("Data not found.");  
 }  
 }  
  
 public static void main(String[] args) {  
 LinearSearch ll = new LinearSearch();  
 int[] arr= {56,42,12,34,55,66};  
 ll.search(arr, 34);  
 }  
}