// Online C# Editor for free

// Write, Edit and Run your C# code using C# Online Compiler

// #include<stdio.h>

**SelectionSort**

using System;

public class HelloWorld

{

public static void Main(string[] args)

{

int[] num = new int[] {2,4,1,3,6,7,10,11,5};

PrintArray(num);

SelectionSort(num);

Console.WriteLine();

PrintArray(num);

}

static void PrintArray(int[] num)

{

for(int i=0;i<num.Length;i++)

Console.Write(num[i] + " ");

}

static void SelectionSort(int[] num)

{

int temp;

for(int i=0;i<num.Length-1;i++)

{

for(int j= i+1; j<num.Length; j++)

{

if(num[i] > num[j])

{

temp = num[i];

num[i] = num[j];

num[j] = temp;

}

}

}

}

}

**Bubble Sort**

// Online C# Editor for free

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// #include<stdio.h>

using System;

public class HelloWorld

{

public static void Main(string[] args)

{

int[] num = new int[] {2,4,1,3,6,7,10,11,5};

PrintArray(num);

BubbleSort(num);

Console.WriteLine();

PrintArray(num);

}

static void PrintArray(int[] num)

{

for(int i=0;i<num.Length;i++)

Console.Write(num[i] + " ");

}

static void BubbleSort(int[] num)

{

int temp;

int length = num.Length;

for(int i=0;i<length-1;i++)

{

for(int j= 0; j<length-i-1; j++)

{

if(num[j] > num[j+1])

{

temp = num[j];

num[j] = num[j+1];

num[j+1] = temp;

}

}

}

}

}

**Insertion Sort**

// Online C# Editor for free

// Write, Edit and Run your C# code using C# Online Compiler

// #include<stdio.h>

using System;

public class HelloWorld

{

public static void Main(string[] args)

{

int[] num = new int[] {2,4,1,3,6,7,10,11,5};

PrintArray(num);

InsertionSort(num);

Console.WriteLine();

PrintArray(num);

}

static void PrintArray(int[] num)

{

for(int i=0;i<num.Length;i++)

Console.Write(num[i] + " ");

}

static void InsertionSort(int[] num)

{

int x, j = 0;

for(int i=1;i<num.Length;i++)

{

x = num[i];

j = i-1;

while(j>=0 && num[j] > x)

{

num[j+1] = num[j];

j= j-1;

}

num[j+1] = x;

}

}

}

**Searching**

// Online C# Editor for free

// Write, Edit and Run your C# code using C# Online Compiler

// #include<stdio.h>

using System;

public class HelloWorld

{

static int[] num = new int[] {2,4,1,3,6,7,10,11,5};

public static void Main(string[] args)

{

//Console.WriteLine("Enter element to search");

int x = 4;

bool flag = LinearSearch(x);

if(flag== true)

Console.WriteLine("Found");

else

Console.WriteLine("Not Found");

flag = BinarySearch(x);

if(flag== true)

Console.WriteLine("Found");

else

Console.WriteLine("Not Found");

Console.WriteLine();

}

static bool LinearSearch(int x)

{

bool flag = false;

for(int i=0;i<num.Length;i++)

{ if(num[i]== x)

{

flag= true;

break;

} }

return flag;

}

static bool BinarySearch(int x)

{

bool flag = false;

int low = 0;

int high = num.Length-1;

int mid = (low+high)/2;

while(low < high)

{

if(x==num[mid])

{

flag=true;

break;

}

else if(x > num[mid])

{

low = mid+1;

}

else if(x < num[mid])

{

high = mid-1;

}

mid = (low+high)/2;

}

return flag;

}

}