

15/45

26 Tuesday



2022

APRIL	S	M	T	W	T	F	S	S
13	4	5	6	7	8	9	10	11
12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29
30	31							

Sorting

1. Bubble Sort
2. Insertion Sort
3. Selection Sort

1. Bubble Sort:- The Sorting algo. find the largest value and place it into the their right position.

- In each time only one value place it into there right place.

- Explanation:-

0	1	2	3	4
5	3	1	2	4

Unsorted



Bubble Sort (run the loop for total size of array)

2022

Increase intake of biotin foods like brown rice, bran cereals, yeast, nuts, beans, peas, cauliflower to reduce hair loss and promote hair growth.

27 Wednesday

APRIL

STAR
Personal & Caring
Health Insurance

Code:-

```
public void BubbleSort(int[] arr)
{
    for(int counter = 0; counter < arr.length - 1; counter++)
    {
        for(int i = 0; i < arr.length - 1 - counter; i++)
        {
            if(arr[i] > arr[i+1])
            {
                temp = arr[i];
                arr[i] = arr[i+1];
                arr[i+1] = temp;
            }
        }
    }
}
```

2022

If you are a diabetic, regularly visit your eye care professional to prevent associated eye problems.

Expla

min

2

3

If you drink alco

Selection Sort:-

1; i++)

Explanation:- Put the smallest value into their correct position.

Explanation:-

0	1	2	3	4
5	3	2	1	2

min = arr[0];

if (min > arr[j]);

{ swap the values;

}

APRIL						2022
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5

29 Friday
APRIL

public void SelectionSort(~~\$~~ ~~arr~~ int[] arr)

{ ~~int min = arr[0];~~

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

{ int min = arr[i];

if (arr

for (int j = i + 1; j < arr.length; j++)

{ int temp;

if (min > arr[j])

{ temp = arr[i];

arr[i] = arr[j];

arr[j] = min;

min = temp;

Snack on a handful of Almonds as they are a rich source of Vitamin E and helpful in reducing cholesterol.

APRIL 2022						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

30 Saturday
APRIL



Insertion Sort:- In insertion sort array divided into the two parts first one sorted and other are unsorted.

Code:-

```
public void Insertion_Sort (int [] arr) {
    for (int counter = 1; counter <= arr.length() - 1; counter++)
    {
        int val = arr[counter];
        int j = counter - 1;

        while (j >= 0 && arr[j] > val)
        {
            arr[j+1] = arr[j];
            j--;
        }
        arr[j+1] = val;
    }
}
```

2022

If you take alcohol, try switching your alcoholic drink choices to red wine and dark beer for maximum heart protection.

MAY						
W	M	T	W	T	F	S
18	2	3	4	5	6	7
19	8	9	10	11	12	13
20	14	15	16	17	18	19
21	20	21	22	23	24	25

1 Sunday

* Searching

1. Linear Search :-
2. Binary Search :-

* Linear Search :- It very simple and easy algo.

```
for (i = 0; i < arr.length - 1; i++)
{
    if (arr[i] == item)
    {
        // found
    }
}
```

2022

Three keys to diabetes prevention: Maintain normal body weight, get 30 minutes of exercise per day, eat a low fat high fiber diet.

MAY

* Binary Search :- In Binary Search we used the three different pointers to point the array.

low - arrays [low] ;

low :- It used for lower bound of the array.

high :- It used for upper bound of the array.

mid = $\frac{\text{low} + \text{high}}{2}$ - This calⁿ the mid of the array.

Note :- for binary search array must be sorted !!

2022

Avoid drinking too much tea or coffee with sugar as it increases the risk of tooth decay.

3 Tuesday
MAY

Code:

```
int BinarySearch(int arr[], int item)
{
    int low-bound = 0;
    int high-bound = arr.length - 1;
    int mid = (low + high) / 2;
```

```
    while (low <= high)
    {
        if (arr[mid] > item)
        {
            high = mid - 1;
        }
    }
```

```
    else if (arr[mid] < item)
    {
        low = mid + 1;
    }
```

2022

If you have heat rash, do not use a towel after a shower and allow your body to air dry.
The rash will disappear faster.

MAY

The Health Insurance Special

else

return mid;

{ mid = low + high / 2;

}

return -1;

}

MAY							2022
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5 Thursday
MAY



* The list of problem using binary tree search

1. lower and upper bound find the given item.
2. Book allocation problem.
3. Painter partition problem.
4. Aggressive cows.

And many more on youtube !!

* Time Complexity *

Cases	BubbleSort	Modified BubbleSort
Best Case	$O(n^2)$	$O(n)$
Avg. Case	$O(n^2)$	$O(n^2)$
Worst Case	$O(n^2)$	$O(n^2)$

Cases	Selection Sort	Insertion
Best Case	$O(n^2)$	$O(n)$
Avg. Case	$O(n^2)$	$O(n^2)$
Worst Case	$O(n^2)$	$O(n^2)$

If you love chocolate, go for the dark variety as pure dark chocolate contains heart healthy antioxidants called catechins.