

DATA STRUCTURES AND ALGORITHMS

PRACTICE No.2

Searching min/max element of the array

Add and delete an element from the array

Min / Max searching

- Swaping algorithm of two variables
- Min/max searching algorithm
- Coding in C

```
#include <stdio.h>
```

```
int main ()
```

```
{
```

```
    int array[10];
```

```
        int maximum;
```

```
        int i;
```

```
    srand(1);
```

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

```
            array [i] = rand();
```

```
        maximum = array [0];
```

```
        for ( i = 1; i < 10; i++ )
```

```
        {
```

```
            if ( maximum < array[ i ] )
```

```
                maximum = array[ i ];
```

```
        }
```

```
printf ("Array\n");  
  
    for ( i = 0; i < 10; i++ )  
  
        printf("%d ", array[i]);  
  
    printf("\n\nMax element is %d", maximum);  
  
    system("pause");  
  
return 0;  
  
}
```

Additional TASK:

- find the index number of max element.

Delete an element of an array

```
printf ("Enter the location where you wish to delete element\n");  
scanf("%d", &position);
```

```
if ( position >= N+1 )  
    printf("It's not possible to delete.\n");
```

```
else  
    for ( i = position - 1 ; i < N - 1 ; i++ )  
        array[i] = array[i+1];
```

Homework

No.1

- Write program that swaps values of two variables without using additional variable.

No.2

- Sheep and chickens graze outdoors. You know total number of animal and total number of the legs. Calculate how many sheeps and how many chickens graze outdoors.

No.3

- Find the date (yyyy.mm.dd) from user defined date by adding/deleting one day.