Institute of Technology of Cambodia

Department of Information and Communication Engineering (GIC)

Assignment8

Lab07- Work with Array (part II)

Lecturer	:	Bou Channa
Subject	:	Algorithms and Programming (TP)

Student	:	Heang Sopagna
ID	:	e20180259
Group	:	GIC-A

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60. C programming-Lab07-Work with Array (part II).c | 59. C programming-Lab07-Work with Array (part II).c | 58. C programming-Lab07-Work with Array (part II).c

```c
#include<stdio.h>
#include<string.h>
main(){
    char cha[50];
    int i;

    printf("Enter a string: "); gets(cha);
    i=strlen(cha)-1;
    for(i;i>=0;i--){
        printf("%c",cha[i]);
    }
}
```

```
"D:\school\Year3\2. Algorithm & Programming (S1)\TP\58. C programming-Lab07-Work with Array (part II).exe"
Enter a string: hello world
dlrow olleh
Process returned 0 (0x0)   execution time : 18.571 s
Press any key to continue.
```

60. C programming-Lab07-Work with Array (part II).c | 59. C programming-Lab07-Work with Array (part II).c | 58. C programming-Lab07-Work with Array (part II).c

```c
#include<stdio.h>
main(){
    int i,j,k=0,sum=0,num[5][5];

    for(i=0;i<5;i++){
        for(j=0;j<5;j++){
            k=k+1;
            sum=sum+k;
            num[i][j]=k;
        }
    }
    for(i=0;i<5;i++){
        for(j=0;j<5;j++){
            printf("%d\t",num[i][j]);
        }
        printf("\n");
    }
    printf("\n");
    for(i=0;i<5;i++){
        for(j=4;j>=0;j--){
            printf("%d\t",num[i][j]);
        }
        printf("\n");
    }
    printf("\n");
    printf("The sum of data in 2D array is %d",sum);
}
```

```
"D:\school\Year3\2. Algorithm & Programming (S1)\TP\59. C programmin
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

5       4       3       2       1
10      9       8       7       6
15      14      13      12      11
20      19      18      17      16
25      24      23      22      21

The sum of data in 2D array is 325
Process returned 0 (0x0)   execution time : 0.084 s
Press any key to continue.
```

60. C programming-Lab07-Work with Array (part II).c | 59. C programming-Lab07-Work with Array (part II).c | 58. C programming-Lab07-Work with Array (part II).c

```c
#include<stdio.h>
main(){
    int i,num[7],max,semax;

    for(i=0;i<7;i++){
        printf("Enter the number%d: ",i+1);
        scanf("%d",&num[i]);
    }
    max=-9999999999;
    for(i=0;i<7;i++){
        if(max<num[i]){
            semax=max;
            max=num[i];
        }
    }
    printf("The largest number is %d and the second largest is %d",max,semax);
}
```

```
"D:\school\Year3\2. Algorithm & Programming (S1)\TP\60. C programming-Lab07-Work with Array (part II).exe"
Enter the number1: 73
Enter the number2: 92
Enter the number3: -84
Enter the number4: 0
Enter the number5: 17
Enter the number6: 58
Enter the number7: 30
The largest number is 92 and the second largest is 73
Process returned 0 (0x0)   execution time : 27.321 s
Press any key to continue.
```

61. C programming-Lab07-Work with Array (part II).c | 60. C programming-Lab07-Work with Array (part II).c | 59. C programming-Lab07-Work with Array (part II).c

```c
#include<stdio.h>
main(){
    int myarray[8],i,n,count=0,index[8],j=0;

    for(i=0;i<8;i++){
        printf("Enter a numberl(0-9): ");
        scanf("%d",&myarray[i]);
    }
    printf("Enter any n number(0-9): ");
    scanf("%d",&n);
    for(i=0;i<8;i++){
        if(n==myarray[i]){
            count++;
            index[j]=i;
            j++;
        }
    }
    printf("\nThe number %d appear %d time in myarray.\n",n,count);
    if(count>=1){
        printf("The number %d appear in position ",n);
        for(j=0;j<count;j++){
            printf("%d ",index[j]);
        }
    }
}
```

```
"D:\school\Year3\2. Algorithm & Programming (S1)\TP\61. C programming-Lab07-Wo
Enter a number1(0-9): 2
Enter a number1(0-9): 4
Enter a number1(0-9): 9
Enter a number1(0-9): 4
Enter a number1(0-9): 3
Enter a number1(0-9): 9
Enter a number1(0-9): 0
Enter a number1(0-9): 7
Enter any n number(0-9): 4

The number 4 appear 2 time in myarray.
The number 4 appear in position 1 3
Process returned 0 (0x0)   execution time : 26.012 s
Press any key to continue.
```

62. C programming-Lab07- Work with Array (part II).c | 61. C programming-Lab07-Work with Array (part II).c | 60. C programming-Lab07-Work with Array (part II).c

```c
#include<stdio.h>
#include<time.h>
main(){
    int m1[3][3],m2[3][3],m3[3][3];
    int sum=0,i,j,maximum,minimum;
        srand(time(0));
    int min=0, max=50;
    float average;

    for(i=0;i<3;i++){
        for(j=0;j<3;j++){
            m1[i][j]=rand()%max+min;
            m2[i][j]=rand()%max+min;
            m3[i][j]=m2[i][j]+m1[i][j];
            sum=sum+m3[i][j];
        }
    }
    printf("\tThe randomize number in m1\n\n");
    for(i=0;i<3;i++){
        for(j=0;j<3;j++){
           printf("%d\t",m1[i][j]);
        }
        printf("\n");
    }
    printf("\n\tThe randomize number in m2\n\n");
    for(i=0;i<3;i++){
        for(j=0;j<3;j++){
           printf("%d\t",m2[i][j]);
        }
        printf("\n");
    }
    printf("\n\tThe number in m3\n\n");
    for(i=0;i<3;i++){
        for(j=0;j<3;j++){
           printf("%d\t",m3[i][j]);
        }
        printf("\n");
    }
    average=sum/9.0;
    maximum=m3[0][0];
    minimum=m3[0][0];
    for(i=0;i<3;i++){
        for(j=0;j<3;j++){
            if(maximum<m3[i][j]){
                maximum=m3[i][j];
            }
            if(minimum>m3[i][j]){
                minimum=m3[i][j];
            }
        }
    }
    printf("\nThe maximum number in m3 is %d\n",maximum);
    printf("The minimum number in m3 is %d\n",minimum);
    printf("The average in m3 is %.2f\n",average);
}
```

```
"D:\school\Year3\2. Algorithm & Programming (S1)\TP\62. C programming-Lab0

        The randomize number in m1

35      8       3
2       38      4
28      46      13

        The randomize number in m2

38      10      0
18      13      20
29      40      25

        The number in m3

73      18      3
20      51      24
57      86      38

The maximum number in m3 is 86
The minimum number in m3 is 3
The average in m3 is 41.11

Process returned 0 (0x0)   execution time : 0.131 s
Press any key to continue.
```