1- C Program to find the minimum & maximum value of array elements. (Min_Max Array)

main.c | main.c | main.c | main.c | main.c

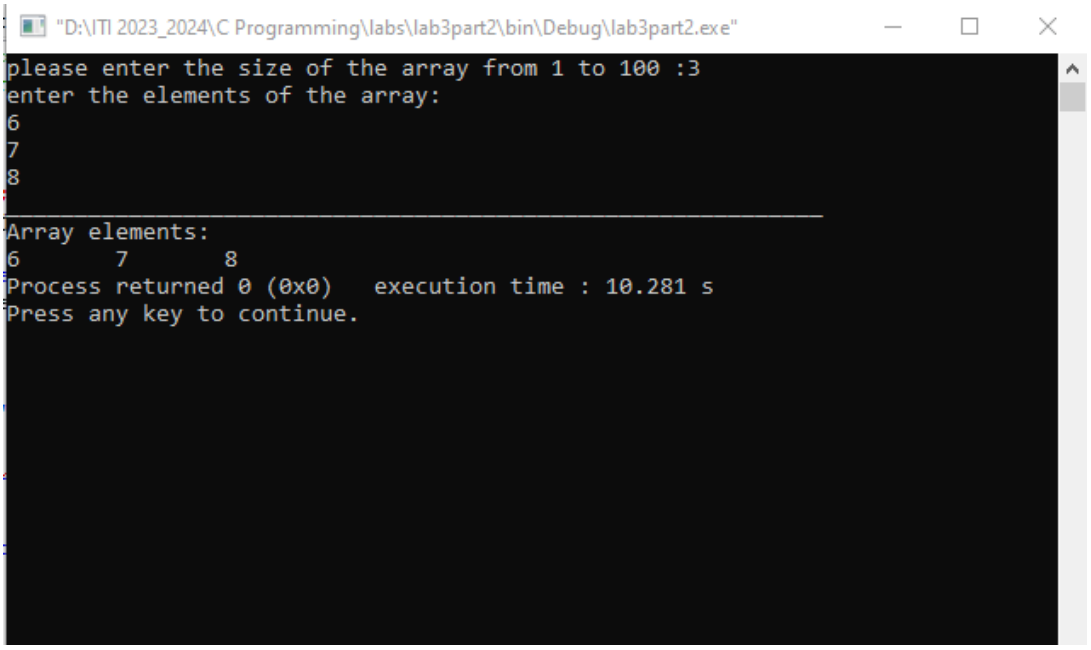
```c
#include <stdio.h>
#include <stdlib.h>
#define SIZE 100
int main()
{

    int size,i,min,max,arr[SIZE];
    printf("please enter the size of the array from 1 to %d :",SIZE);
    scanf("%d",&size);
    for(i=0; i<size; i++)
    {
    printf("please enter numbers of array : ");
        scanf("%d",&arr[i]);
    }
    max=min=arr[0];
    for(i=1; i<size; i++)
    {
         if(min>arr[i]){
                min=arr[i];
         }
         if(max<arr[i]){
                max=arr[i];
         }

    }
    printf("_____ \n");
     printf("minimum number in the array is : %d \n",min);
     printf("maximum number in the array is : %d",max);

    return 0;
}
```

```
"D:\ITI 2023_2024\C Programming\labs\lab3part3\bin\Debug\lab3part3.exe"
please enter the size of the array from 1 to 100 :5
please enter numbers of array : 12
please enter numbers of array : 3
please enter numbers of array : 5
please enter numbers of array : 20
please enter numbers of array : 1
_____
minimum number in the array is : 1
maximum number in the array is : 20
Process returned 0 (0x0)   execution time : 8.564 s
Press any key to continue.
```

2- C Program to take an array elements from user, then print them out "using 2 for loops". (Print Array)

main.c | main.c | main.c | main.c | main.c

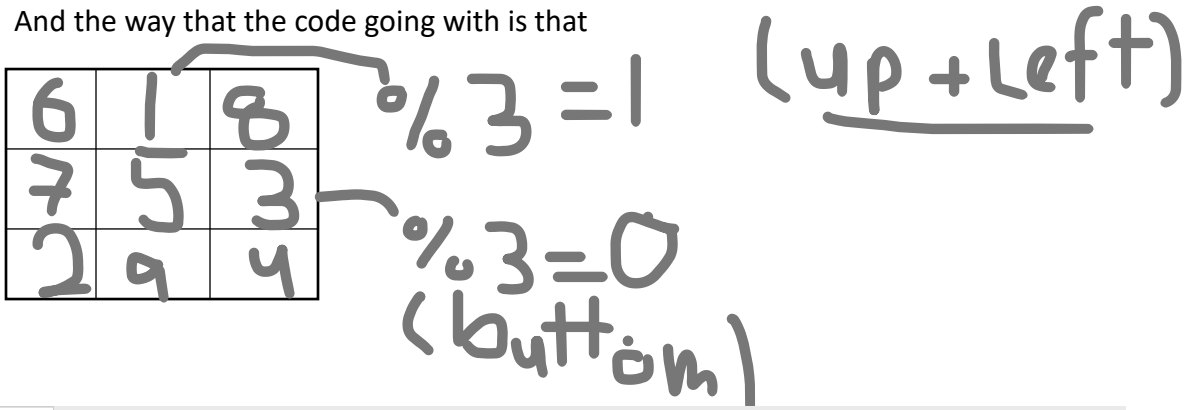
```c
#include <stdio.h>
#include <stdlib.h>
#define SIZE 100

int main() {
    int arr[SIZE];
    int size, i, j;

    printf("please enter the size of the array from 1 to %d :",SIZE);
    scanf("%d", &size);

    printf("enter the elements of the array:\n");
    for (i = 0; i < size; i++) {
        scanf("%d", &arr[i]);
    }
    printf("_____ \n");
    printf("Array elements:\n");
    for (i = 0; i < size; i++) {
        printf("%d \t", arr[i]);
    }
    return 0;
}
```



3- magic box

// first of all we have two ways to make the delay by using the delay function that converts the time into ms and subtract current time and start time to compere with entered time or sleep I tried both of them and they are working .

And the way that the code going with is that



*main.c X

```c
#include <stdio.h>
#include <stdlib.h>
#include<windows.h>
#include <time.h>

int main()
{

void gotoxy(int x,int y)
{
    COORD coord= {0,0};
    coord.X=x;//col
    coord.Y=y;//row
    SetConsoleCursorPosition(GetStdHandle(STD_OUTPUT_HANDLE),coord);
}
void delay(int number_of_seconds) {
    int milliseconds = 1000 * number_of_seconds;
    clock_t start_time = clock(); // here we have var called start_time of type clock_t and assign the current time to it clock
    while ((clock() - start_time) < milliseconds) {
    }
}
    int i,row,column,input;
    int magicBoxSize;
    printf("please enter the size of magic box \n");
    scanf("%d",&magicBoxSize);

    row=1;
    column=(magicBoxSize+1)/2; //to start from middle 3+1/2--> it will be 2
    input=1; //the start number
```

*main.c

```
30      if(magicBoxSize%2!=0){ // to check that user enter a size of odd number only
31      do{
32
33                  gotoxy(column *3,row); //passing column and row to goto function
34                  printf("%d",input);
35                  //Sleep(1000); // its like a delay for one second
36                  delay(1); // delay function
37                  if(input%magicBoxSize==0){ //will go under the input what we are in
38                      row++;
39                  }
40                  else{  //will go up and left the input what we are in
41                      row--;
42                      column--;
43                  }
44                  if (row==0){ // if i go up i will return to buttom
45                      row=magicBoxSize;
46                  }
47                  if (column==0){// if i go left i will return to right
48                      column=magicBoxSize;
49                  }
50                  input ++; //increment the input to use it
51
52              }
53          while(
54                input<=magicBoxSize*magicBoxSize
55                // here we stop the loop if we arrive to input matches the size*size that we enter
56                //because we want a range of numbers from 1 to size*size
57                );
58
```

```
60
61      }
62      else {
63            printf("please try to put odd number like 3 ,7 ,...");// to make user know that he has to put odd number not even
64      }
65
66
67      return 0;
68
69  }
70
```