forNextDay()6

Two Pointer Fails and Their Explanations

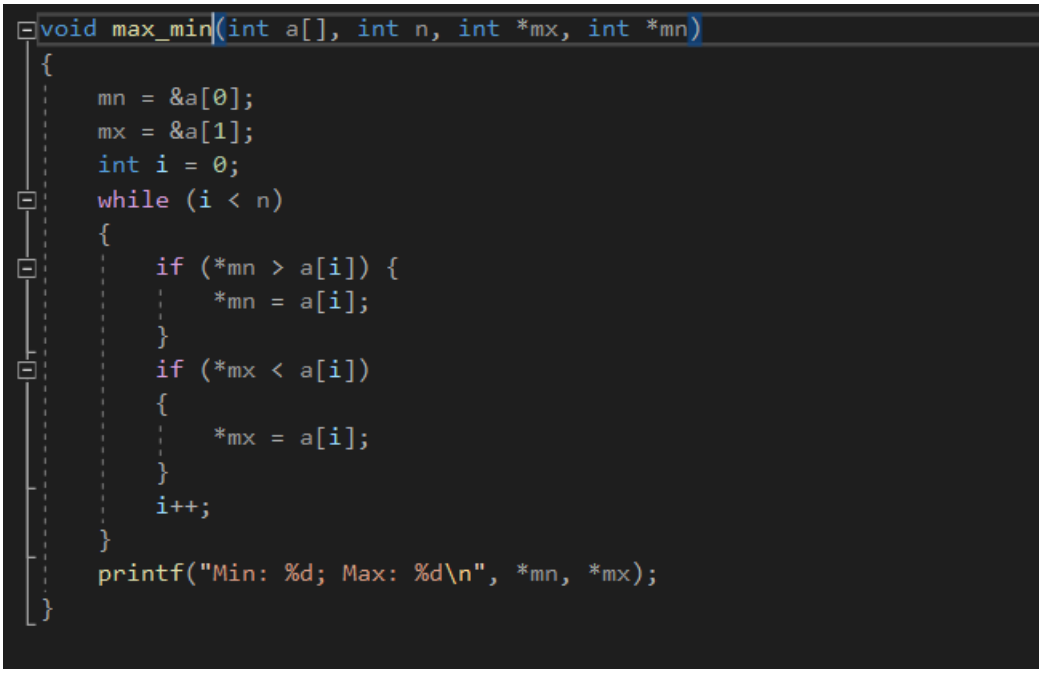
1. Defining a void (type-less) pointer and not casting it to a type when needing to use it. This is a failure because a pointer needs to be the same type as the variable whose address will be referred to. For instance, if there is a variable int and we need to point to its address, we will need an int pointer.

2. Assigning a non-address to a pointer because pointers are variables that store addresses not the values themselves.

int scanfIntArray code

```c
int scanfIntArray(int a[], int n) {
    int i = 0;
    while (i < n)
    {
        printf("Enter the element to be added to the array: ");
        scanf("%d", &a[i]);
        i++;
    }
    max_min(a, n, a[0], a[1]);
    return printf("There are %d elements in the array.\n", i);
}
```

void max_min code



```c
void max_min(int a[], int n, int *mx, int *mn)
{
    mn = &a[0];
    mx = &a[1];
    int i = 0;
    while (i < n)
    {
        if (*mn > a[i]) {
            *mn = a[i];
        }
        if (*mx < a[i])
        {
            *mx = a[i];
        }
        i++;
    }
    printf("Min: %d; Max: %d\n", *mn, *mx);
}
```

Code of the whole program

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

int main()
{
    int size;
    printf("Enter the size of the array: ");
    scanf("%d", &size);
    int array[size];
    scanfIntArray(array, size);
    return EXIT_SUCCESS;
}

int scanfIntArray(int a[], int n) {
    int i = 0;
    while (i < n)
    {
        printf("Enter the element to be added to the array: ");
        scanf("%d", &a[i]);
        i++;
    }
    max_min(a, n, a[0], a[1]);
    return printf("There are %d elements in the array.\n", i);
}

void max_min(int a[], int n, int *mx, int *mn)
{
    mn = &a[0];
    mx = &a[1];
    int i = 0;
    while (i < n)
    {
        if (*mn > a[i]) {
            *mn = a[i];
        }
        if (*mx < a[i])
        {
            *mx = a[i];
        }
        i++;
    }
    printf("Min: %d; Max: %d\n", *mn, *mx);
}
```

Testing

```
Enter the size of the array: 5
Enter the element to be added to the array: 6
Enter the element to be added to the array: 58
Enter the element to be added to the array: 63
Enter the element to be added to the array: 12
Enter the element to be added to the array: 3
Min: 3; Max: 63
There are 5 elements in the array.
```