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CS 240

Homework2

10/10/2023

Question 2:

```c
#include<stdio.h>

int main() {
    for (int i = 0; i < 10; i++) {
        printf("Welcome to CS240\n");
    }
    return 0;
}
```

Question 3:

It is because the representation of 0.1 either as a flow or a double is not truly 0.1. Since float and double are stored as binary format that cannot represent exactly the number that we intended, which is why they're rounding numbers. Thus, using operator "==" will result in a not desired result. To fix this, we will need to convert these values into epsilon values when doing comparison.

Question 4:

```c
#include<stdio.h>

int main() {
    int i = 2; //being used to assign a variable

    if (i == 1) //being used as an equality operator
    {
        printf("true\n");
    } else {
        printf("false\n");
    }
}
```

When writing it as an equality operator the best practice is to put the values that we are going to assign before the equality operator. This way, if we miss a "=" in the comparison, it will not compile and return an error message.

Example:

```c
#include<stdio.h>

int main() {
    int i = 2; //being used to assign a variable

    if (1 == i) // the best practice
    {
        printf("true\n");
    } else {
        printf("false\n");
    }
}
```

Example with "=" missing:

```c
#include<stdio.h>

int main() {
    int i = 2; //being used to assign a variable

    if (1 = i) //being used as an equality operator
    {
        printf("true\n");
    } else {
        printf("false\n");
    }
}
Test.c: In function ‘main’:
Test.c:6:11: error: lvalue required as left operand of assignment
    6 |     if (1 = i) //being used as an equality operator
```