1 Conditionals

1. What is the value of `result` when the following code is executed?

```
float result = 1.5;
int a = 12, b = 5;
if(b > a) {
        result+=0.3;
}
else {
        result -=0.3;
}
```

2. What is the value of `result` when the following code is executed?

```
float result = 1.5;
int a = 12, b = 5;
if(a % b == a / b) {
        result+=0.3;
}
else {
        result -=0.3;
}
```

3. What is the value of `result` when the following code is executed, if,

    1. `a = 7, b = 12`
    2. `a = 15, b = 12`
    3. `a = 12, b = 12`

```
int result = 4;
if(b > a) {
        result = 1;
}
else if(b < a) {
        result = -1;
}
else {
        result = 0;
}
```

7. For what range of `marks`, will the value of `result` when the following code is executed, be 2?

```
int result = 0;
int marks = (int)random(101); //between 0 and 100
if(marks < 50)
        result = 0;
```

```
5           else if(marks < 65)
6                   result = 1;
7           else if(marks < 75)
8                   result = 2;
9           else if(marks < 85)
10                  result = 3;
11          else
12                  result = 4;
```

8. Assuming the existence of an integer variable `data` with some value stored in it, write a piece of code that assigns the absolute value of `data` into another integer variable `result`

9. Assuming the existence of two integer variables `a, b` with some values stored in them, write a piece of code that assigns, to a third integer variable `result`,

    1. 1 if both `a, b` are positive
    2. -1 if both `a, b` are negative
    3. 0 in all other cases

10. Assuming the existence of two integer variables `a, b` with some values stored in them, write a piece of code that assigns, to a third integer variable `result`,

    1. 1 if both `a, b` are even
    2. -1 if both `a, b` are odd
    3. 0 in all other cases

11. Assuming the existence of an floating-point variable `data` with some value stored in it, write a piece of code that assigns, to a second integer variable `result`, the value of `data` rounded-off to the nearest integer. For example, if `data = 4.6`, `result` should be `5`. If `data = 4.4`, `result` should be `4`. if `data = 4.5`, `result` should be `5`. if `data = 4.0`, `result` should be `4`.

12. Assuming the existence of three integer variables `a, b, c` with some values stored in them, write a piece of code that assigns, to a fourth integer variable `result` according to the following table,

a	b	c	result
positive	positive	positive	0
positive	positive	non-positive	1
positive	non-positive	positive	2
positive	non-positive	non-positive	3
non-positive	positive	positive	4
non-positive	positive	non-positive	5
non-positive	non-positive	positive	6
non-positive	non-positive	non-positive	7