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**Tutorial 04 – CS102.3**

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**Q1**

- The logical OR operator in C is represented by ||, not | this one .
- Comparison operator: When comparing the value of numNeighbors with 4, you should use the equality operator ==, not the assignment operator =.
- The code block inside the if statement should be properly indented to indicate it.

**Q2**

- The reason is that the first 'if 'statement checks whether 'number' is greater than 0.
- Since number has the value 4, which is indeed great than the 0.
- The inner 'if' statement is executed.
- The alpha has the value -1.0, which is not greater than 0.

**Q4**

1. If (taxcode == 'T') {
   Price += (taxrate /100) * price ;

   }

2. if (opCode == 1) {
   double X, Y;

   scanf("%lf %lf", &X, &Y);

   double sum = X + Y;

   printf("Sum: %lf\n", sum);

   }.

3. if (currentNumber % 2 != 0) {
   currentNumber = (3 * currentNumber) + 1;

   } else {

   currentNumber = currentNumber / 2;

   }

4. 
```
if (year % 4 == 0 && (year % 100 != 0 || year % 400 == 0)) {
leapYear = true;

} else {

leapYear = false;

}
```

5. 
```
if (distance <= 100) {
    cost = 5.00;
} else if (distance > 100 && distance <= 500) {
    cost = 8.00;
} else if (distance > 500 && distance < 1000) {
    cost = 10.00;
} else {

    cost = 12.00;
}
```