



**Maritime Labs - Chris Kelly**

Day 9 - May 6, 2017

## **Coding as Real English**

### Comparatives and Conditionals

- 1) Comparative Adjectives**
  - a) Relational Operators**
- 2) Zero Conditional**
  - a) *IF* Statements**
  - b) *IF ... ELSE* Statements**
  - c) *IF ... ELSE IF ... ELSE* Statements**

## 1) Comparative Adjectives

Comparative adjectives are used to compare two nouns (people, places, or things) that they describe or modify. They can be used with **than** in sentences where two nouns are compared:

**Noun (subject) + verb + comparative adjective + *than* + noun (object).**

- My house is **larger than** her house.
- This computer is **better than** that one.
- It's much **colder than** it was yesterday.
- This grammar topic is **easier than** the last one.
- I find science **more difficult than** mathematics.
- This lesson was **more interesting than** the last lesson.

### Forming Regular Comparatives

Forming regular comparatives is easy. The form depends on the number of **syllables** in the original adjective. For example:

dog	1 syllable	• dog
excellent	3 syllables	• • • ex cel lent
simple	2 syllables	• • sim ple

### (Syllable Worksheet)

## One Syllable Adjectives

Add **-er**

- My house is **larger than** her house.
- He is **taller than** his brother.

If the adjective has a **consonant + single vowel + consonant** spelling, the final consonant must be doubled before adding the ending.

- **big** - My hamburger is **bigger than** your hamburger.

## Two Syllable Adjectives ending in -y

Change the **y** to an **i** before adding the **-er** ending.

- **easy** - This grammar topic is **easier** than the last one.
- **happy** - She's looking **happier** today **than** yesterday.

## Other adjectives with two or more syllables

Use **more** with the unchanged adjective

- The shops are always **more crowded** just before Christmas.
- Russian grammar is **more difficult** than English grammar.
- I find math lessons **more enjoyable** than science lessons.

## Irregular comparatives

There are some adjectives that don't follow the rules. These need to be memorized.

Adjective	Comparative
good	better
bad	worse
little	less
great	greater
far	further / farther

## (Comparative Adjective Worksheet)

### a) Relational Operators

When we compare two or more values (numbers and variables), we also use comparative adjectives. One value may be **LESS THAN** or **GREATER THAN** the other value. There is a third possibility; the values could be **EQUAL TO** each other. In Java code, these are known as Relational Operators.

## Relational Operators

Operator	Meaning	Code	English
<	Less Than	a<b	A is less than B.
>	Greater Than	a>b	A is greater less than B.
==	Equal To	a==b	A is equal to B.
!=	Not Equal To	a!=b	A is not equal to B.
<=	Less Than or Equal To	a<=b	A is less than or equal to B.
>=	Greater Than or Equal To	a>=b	A is greater than or equal to B.

Data	English
my car < your car <b>less expensive</b>	My car is <b>less expensive than</b> your car.
my brother > my sister <b>taller</b>	My brother is <b>taller than</b> my sister.
his job == your job <b>the same as</b>	His job is <b>the same as</b> your job.
my culture != your culture <b>not the same as</b>	My culture is <b>not the same as</b> yours.
my grade <= your grade	My grade is <b>less than or the same as</b> your grade.
my income >= your income	My income is <b>greater than or the same</b> <b>as</b> your income

## 2) Zero Conditional

When we talk about things that are always or usually true, we can use **zero conditional**. It can help decide if something is **TRUE** or **FALSE**, and if it is **TRUE**, there is an action. If it is **FALSE**, there is no action. It is made up of:

**If** + present simple (TRUE), **then** + present simple (action).

- **If** I get home late, **then** my father gets angry.
- **If** he gets there before me, **then** ask him to wait.
- **If** the phone rings, **then** answer it.

### (Zero Conditional Worksheet)

#### a) *IF* Statement

Look at the **Java** code below. The **IF** statement uses the **zero conditional** to decide if something is **TRUE** or **FALSE**. What are the real English sentences for this code? What is the output of this program?

```
public class IFDemo {  
    public static void main(String [] args) {  
        int a = 5, b = 7;  
        if (a > b)  
            System.out.println("a > b");  
        if (a < b)  
            System.out.println("a < b");  
    }  
}
```

#### Coding in Real English - *IF* Statements

- 1) **If** A is greater than B, **then** print "a > b".
- 2) **If** A is less than B, **then** print "a < b".
- 3) Output = `System.out.println("a < b");`

## b) *IF ... ELSE* Statement

When the first choice in an *IF* statement is **FALSE**, sometimes it means that the second choice is automatically **TRUE**. This is where the *IF ... ELSE* statement is used in Java. However, when saying this in English, we don't use the word **else**. Instead we use **otherwise**, so it is made up of:

**If** + present simple, **then** + present simple; **otherwise**, + present simple.

Notice the use of the semi-colon ( ; ) and comma ( , ) before and after the word **otherwise**.

- **If** I get home before 5:00, **then** I make dinner; **otherwise**, my wife makes dinner.
- **If** I am late, **then** my boss gets angry; **otherwise**, he is nice to me.
- **If** there is a sale, **then** I buy shoes; **otherwise**, I use my old shoes.

Look at the **Java** code below. The *IF ... ELSE* statement uses the **zero conditional** to decide if something is **TRUE** or **FALSE**. What is the real English sentence for this code? What is the output of this program?

```
public class IF_ELSEDemo {
    public static void main(String[] args) {
        int a = 6, b = 3;
        if (a > b)
            System.out.println("a > b");
        else
            System.out.println("a < b");
    }
}
```

Coding in Real English - *IF ... ELSE* Statements

- 1) **If** A is greater than B, **then** print "a > b"; **otherwise**, print "a < b".
- 2) Output = `System.out.println("a > b");`

### c) **IF ... ELSE IF ... ELSE Statement**

Sometimes there are more than two choices in a statement, especially when using Relational Operators. The third possibility is that the items are **EQUAL TO** each other. The English sentence would end up being longer:

**If** + present simple, **then** + present simple; **otherwise**, **if** + present simple, **then** + present simple; **otherwise**, + present simple.

- **If** I get home before my wife, **then** I make dinner; **otherwise**, if my wife gets home before me, **then** she makes dinner; **otherwise**, we make dinner together.

Look at the **Java** code below. The **IF** and **ELSE IF** statements use the **zero conditional** to decide if something is **TRUE** or **FALSE**. What is the real English sentence for this code? What is the output of this program?

```
public class IF_ELSEIF_ELSEDemo {  
    public static void main(String[] args) {  
        int a = 5, b = 5;  
        if (a > b)  
            System.out.println("a > b");  
        else if (a < b)  
            System.out.println("a < b");  
        else  
            System.out.println("a = b");  
    }  
}
```

Coding in Real English - **IF ... ELSE Statements**

- 1) **If** A is greater than B **then** print "a > b"; **otherwise**, If A is less than B, print "a < b"; **otherwise**, print "a = b".
- 2) Output = `System.out.println("a = b");`