

Logic-1: cigarParty

When squirrels get together for a party, they like to have cigars. A squirrel party is successful when the number of cigars is between 40 and 60, inclusive. Unless it is the weekend, in which case there is no upper bound on the number of cigars. Return true if the party with the given values is successful, or false otherwise.

```
public boolean cigarParty(int cigars, boolean isWeekend) {  
}
```

Step 1

Declare a variable of the same type as the return type of the method.
Choose a variable name that makes sense in terms of what question the method is answering. Typically, initialize the variable to a negative/no answer – in this case, when the party is NOT successful.

```
public boolean cigarParty(int cigars, boolean isWeekend) {  
    boolean successful = false;  
}
```

Step 2

Return the variable.
You can now press the GO button and see how the method runs.
Notice that – as written so far – it always returns false.

```
public boolean cigarParty(int cigars, boolean isWeekend) {  
    boolean successful = false;  
    return successful;  
}
```

Step 3

Add an if statement, leaving the condition inside the parentheses unspecified for the moment. In the body of the if statement, set the return variable to the "positive" value when the condition will be true, in this case, when the party is a success.

```
public boolean cigarParty(int cigars, boolean isWeekend) {  
    boolean successful = false;  
    if () {  
        successful = true;  
    }  
    return successful;  
}
```

Step 4

Fill in the condition that will make the party successful (*A squirrel party is successful when the number of cigars is between 40 and 60, inclusive.*) Press GO to make sure the program runs.

```
public boolean cigarParty(int cigars, boolean isWeekend) {  
    boolean successful = false;  
    if (40 <= cigars && cigars <= 60) {  
        successful = true;  
    }  
    return successful;  
}
```

Step 5

Notice that this condition is only for when it is **NOT** the weekend (*Unless it is the weekend, in which case there is no upper bound on the number of cigars.*). Select the 3 lines of the if statement and press the TAB key to indent them one level to the right.

```
public boolean cigarParty(int cigars, boolean isWeekend) {
    boolean successful = false;
        if (40 <= cigars && cigars <= 60) {
            successful = true;
        }
    return successful;
}
```

Step 6

Add an OUTER if statement, whose condition is "NOT the weekend" (**!isWeekend**). NOTICE that all statements within a block (between curly brackets) are indented one level. An if statement inside of another if statement is known as a **NESTED if statement**.

```
public boolean cigarParty(int cigars, boolean isWeekend) {
    boolean successful = false;
    if (!isWeekend) {
        if (40 <= cigars && cigars <= 60) {
            successful = true;
        }
    }
    return successful;
}
```

Step 7

Duplicate the NESTED if statement. Change the condition in the second NESTED if statement to its opposite: IS the weekend (**isWeekend**).

```
public boolean cigarParty(int cigars, boolean isWeekend) {
    boolean successful = false;
    if (!isWeekend) {
        if (40 <= cigars && cigars <= 60) {
            successful = true;
        }
    }
    if (isWeekend) {
        if (40 <= cigars && cigars <= 60) {
            successful = true;
        }
    }
    return successful;
}
```

Step 8

On the weekend, there is "no upper bound". So delete the highlighted part of the condition.

```
public boolean cigarParty(int cigars, boolean isWeekend) {
    boolean successful = false;
    if (!isWeekend) {
        if (40 <= cigars && cigars <= 60) {
            successful = true;
        }
    }
    if (isWeekend) {
        if (40 <= cigars && cigars <= 60) {
            successful = true;
        }
    }
    return successful;
}
```

Step 9

Done!

During the week, the method will return true when the number of cigars is between 40 and 60. On the weekend, the method will return true when the number of cigars is simply ≥ 40 . In all other cases, it will return false.

```
public boolean cigarParty(int cigars, boolean isWeekend) {
    boolean successful = false;
    if (!isWeekend) {
        if (40 <= cigars && cigars <= 60) {
            successful = true;
        }
    }
    if (isWeekend) {
        if (40 <= cigars) {
            successful = true;
        }
    }
    return successful;
}
```