

# For Loop

What if we want our code to execute a specific number of times? We can use a `for` loop to do that.

```
for (initialization; stopping condition; iteration statement)
{
    statement;
}
```

The `for` loop tells the computer how many times to repeat the instructions using the `for` keyword and three expressions inside of parentheses. Each of these expressions use what's known as an `iterator` variable, which is a variable that keeps track of how many times the program goes through the loop.

These expressions are:

*Initialization:* where the loop begins

*Stopping condition:* the condition that the iterator variable is evaluated against

*Iteration statement:* used to update the iterator variable on each loop

The `for` loop is good to use when you know the number of times you'd like to perform a task before you begin, like printing three copies of a document or inserting eight rows into a table.

In our video game, we want ten flags to appear at the start of each level:

```
for (int i = 0; i < 10; i++)
{
    DisplayFlag();
}
```

When a computer receives this program it sets a counter to `0` and executes the instructions in the body of the loop, which in this case instructs the computer to display a flag. After each iteration, or one turn through the loop, the program advances the counter by one (`i++`). The process repeats until the counter

reaches `10`, meaning ten iterations are completed and there are ten flags on the screen.

## ☒ Instructions

1.

For your next tool, you want to create a template for your weekly team meeting. Rather than clone a new one each week, you decide to make all of them at once.

Write an empty `for` loop that runs once for each week in your 16-week long project.

Hint



We can use a `for` loop when we have a specific number of items we want to create or destroy:

```
for (int i = 0; i < 10; i++)  
{  
    DisplayFlag();  
}
```

You'll need roughly 16 templates to get you through your four month project.

2.

Inside of the loop, call the `CreateTemplate()` method. It takes a number as a parameter that represents what week it is within the project so that when the template is generated it will say `Week X` at the top, with `X` representing which week it is.

Hint



To call a method with a parameter, make sure to provide an argument that matches the parameter type in the method signature.

For example, during the first week of the project we want it to say **Week 1** at the top.