# **Control Flow**

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## **Outline**

- Conditional control flow
- Iteration
- Error handling



### **Blocks**

- Group a set of statements between curly braces
- Do not provide variable scope

```
{
}
```



### if

Execute a block if a logical condition is true

```
if (2 === (1 + 1)) {
    // execute this block
}
```



## if ... else

Alternative block to execute if the condition is false

```
if (false) {
    } else {
        // execute this block
}
```



## switch

- Choose from a set of possibilities
- Same as C#





### for

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

Loop initializer Condition Incrementer
```





### for ... in

- Iterates over the property keys of an object
- Similar to C#'s foreach





### while

- Pre-tested loop
- Ensure that the loop condition will eventually become false

```
while (keepGoing) {
    keepGoing = false;
}
```



#### do ... while

- Post-tested loop
- Ensure that the loop condition will eventually become false

```
do {
    keepGoing = false;
} while (keepGoing);
```





# **Error Handling - throw**

- Throw an exception when an unusual error condition occurs
- Exceptions are thrown using the 'throw' statement
- The exception object can be accessed when the exception is caught

```
if (somethingGoesWrong) {
    throw {
        name: "SomethingWentWrongError",
        message: "Something went wrong. You should fix it."
    };
}
```



## **Error Handling - catch**

- When an exception is thrown within a 'try' block it can be caught and handled within a 'catch' block.
- A 'finally' block can be used to guarantee execution of some statements, even in the event of an exception

```
try {
    throw {
        name: "SomethingWentWrongError",
        message: "Something went wrong. You should fix it."
    };
} catch (e) {
    // handle the exception here
}
finally {
    // this is executed even if an exception occurs
}
```





# **Summary**

- If, else and switch
- For, for ... in, while and do ... while
- Exception handling with try, catch & finally



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