Java ~ https://www.w3schools.com/java/

For Loop:

```
for (statement 1; statement 2; statement 3) {
  // code block to be executed
}

for (int i = 0; i < 5; i++) {
  System.out.println(i);
}
```

If Statement:

```
if (condition) {
  // block of code to be executed if the condition is true
}

if (condition) {
  // block of code to be executed if the condition is true
} else {
  // block of code to be executed if the condition is false
}
```

While Loop

```
while (condition) {
  // code block to be executed
}

do {
  // code block to be executed
}
while (condition);
```

Variables

```
type variableName = value;
```

```
int x = 5, y = 6, z = 50;
```

```
final int myNum = 15;
```

Comments

```
// This is a comment
```

Data Types

```
int myNum = 5;                 // Integer (whole number)
float myFloatNum = 5.99f;      // Floating point number
char myLetter = 'D';           // Character
boolean myBool = true;         // Boolean
String myText = "Hello";       // String
```

Arrays

```
String[] cars;
```

```
String[] cars = {"Volvo", "BMW", "Ford", "Mazda"};
```

Switch

```
switch(expression) {
  case x:
    // code block
    break;
  case y:
    // code block
    break;
  default:
    // code block
}
```

Printing

```
public static void main(String[] args) {
  System.out.println("Hello World");
}
```

Main Method

```
public static void main(String[] args)
```

Methods

```
public class Main {
  static void myMethod() {
    // code to be executed
  }
}
```

Classes

```
public class Main {
  int x = 5;
}
```

Javascript ~ https://www.w3schools.com/js/

For Loop:

```
for (statement 1; statement 2; statement 3) {
  // code block to be executed
}
```

For in Loop:

```
for (key in object) {
```

```
  // code block to be executed
}
```

For Of Loop

```
for (variable of iterable) {
  // code block to be executed
}
```

If Statement:

```
if (condition) {
  // block of code to be executed if the condition is true
}
```

```
if (condition) {
  // block of code to be executed if the condition is true
} else {
  // block of code to be executed if the condition is false
}
```

While Loop

```
while (condition) {
  // code block to be executed
}
```

```
do {
  // code block to be executed
}
while (condition);
```

Variables

Var

```
var x = 5;
var y = 6;
```

Let

Can Be redeclared:
let x = "John Doe";

let x = 0;

Const

Cannot be reassigned
const PI = 3.141592653589793;

Comments

// This is a comment

Data Types

```
let length = 16;                              // Number
let lastName = "Johnson";                     // String
let x = {firstName:"John", lastName:"Doe"};   // Object
```

Arrays

const array_name = [item1, item2, ...];

Switch

```
switch(expression) {
  case x:
    // code block
    break;
  case y:
    // code block
    break;
  default:
    // code block
}
```

Printing

console.log()

Main Method

N/A

Methods

```
function name(parameter1, parameter2, parameter3) {
  // code to be executed
}
```

Classes

```
class Car {
  constructor(name, year) {
    this.name = name;
    this.year = year;
  }
}
```

Python ~ https://www.w3schools.com/python/

For Loop:

```
for x in "banana":
  print(x)
```

Can either use:
In range() or in arrayName

If Statement:

```
if b > a:
  print("b is greater than a")
elif a == b:
```

```
  print("a and b are equal")
else:
  print("a is greater than b")
```

While Loop

```
while i < 6:
  print(i)
  i += 1
```

Variables

```
 x = 4       # x is of type int
x = "Sally" # x is now of type str
```

Comments

```
# This is a comment
```

Data Types

Text Type:	str
Numeric Types:	int, float, complex
Sequence Types:	list, tuple, range
Mapping Type:	dict
Set Types:	set, frozenset
Boolean Type:	bool
Binary Types:	bytes, bytearray, memoryview

Arrays

```
mylist = ["apple", "banana", "cherry"]
```

Dictionary

```
thisdict = {
  "brand": "Ford",
  "model": "Mustang",
  "year": 1964
}
```

Printing

print(“String to print”)

Main Method

N/A

Methods

```
Def functionName(param1,param2, etc)
        #Code to be executed within the function
#End of the scope of a function is the un-indentation of the next line
```

Classes

```
class MyClass:
  x = 5
```

C++ ~ https://www.w3schools.com/cpp/

For Loop:

```
for (statement 1; statement 2; statement 3) {
  // code block to be executed
}
```

If Statement:

```
if (condition1) {
  // block of code to be executed if condition1 is true
} else if (condition2) {
```

```
  // block of code to be executed if the condition1 is false and condition2 is true
} else {
  // block of code to be executed if the condition1 is false and condition2 is false
}
```

While Loop

```
while (condition) {
  // code block to be executed
}
```

Variables

```
 type variableName = value;
```

Comments

```
// This is a comment
```

Data Types

```
int myNum = 5;                // Integer (whole number)
float myFloatNum = 5.99;      // Floating point number
double myDoubleNum = 9.98;  // Floating point number
char myLetter = 'D';          // Character
bool myBoolean = true;        // Boolean
string myText = "Hello";      // String
```

Arrays

```
string cars[4] = {"Volvo", "BMW", "Ford", "Mazda"};
string cars[4];
```

Switch

```
switch(expression) {
  case x:
    // code block
    break;
  case y:
    // code block
    break;
```

```
  default:
    // code block
}
```

Printing

```
#include <iostream>
std::cout << "Hello World!";
```

Or

```
#include <iostream>
using namespace std;

cout << "Hello World!" << endl;
```

Main Method

```
int main() {
  cout << "Hello World!";
  return 0;
}
```

Methods

```
void myFunction() {
  // code to be executed
}
```

Classes

```
class MyClass {       // The class
  public:             // Access specifier
    int myNum;        // Attribute (int variable)
    string myString;  // Attribute (string variable)
};
```