

Variables:

JavaScript:

Variables in JavaScript are declared using the var, let, or const keywords.

Example:

javascript

Copy code

```
var x = 5;  
let y = 10;  
const z = 15;
```

Java:

In Java, variables are strongly typed and must be declared with a specific data type.

Example:

java

Copy code

```
int x = 5;  
double y = 10.5;
```

Python:

Python is dynamically typed, meaning variables don't need explicit declaration of data types.

Example:

python

Copy code

```
x = 5  
y = 10.5
```

C++:

C++ variables must be declared with a specific data type before they can be used.

Example:

cpp

Copy code

```
int x = 5;  
double y = 10.5;
```

Data Types:

JavaScript:

JavaScript supports primitive data types like numbers, strings, booleans, null, undefined, as well as complex types like objects and arrays.

Example:

javascript

Copy code

```
let num = 10;  
let str = "Hello";  
let bool = true;  
let obj = { key: "value" };  
let arr = [1, 2, 3];
```

Java:

Java has primitive data types such as int, double, boolean, char, and complex types like arrays and objects.

Example:

java

Copy code

```
int num = 10;
double decimal = 10.5;
char letter = 'A';
```

Python:

Python supports numbers (integers, floats), strings, booleans, lists, tuples, dictionaries, and more.

Example:

python

Copy code

```
num = 10
decimal = 10.5
string = "Hello"
```

C++:

C++ offers primitive data types like int, double, char, and complex types like arrays, structures, and classes.

Example:

cpp

Copy code

```
int num = 10;
double decimal = 10.5;
char letter = 'A';
```

Operators:

JavaScript:

JavaScript supports arithmetic, assignment, comparison, logical, bitwise, and ternary operators.

Example:

javascript

Copy code

```
let sum = 5 + 3;
let isEqual = (10 === 5);
```

Java:

Java supports similar operators to JavaScript along with additional ones for type casting and instance checking.

Example:

java

Copy code

```
int sum = 5 + 3;
boolean isEqual = (10 == 5);
```

Python:

Python has operators for arithmetic, comparison, logical, membership, and identity operations.

Example:

python

Copy code

```
sum = 5 + 3
is_equal = (10 == 5)
```

C++:

C++ offers a wide range of operators similar to Java and JavaScript, including arithmetic, comparison, logical, and bitwise operators.

Example:

cpp

Copy code

```
int sum = 5 + 3;  
bool is_equal = (10 == 5);
```

Control Statements:

JavaScript:

JavaScript provides if-else statements, switch statements, for loops, while loops, and do-while loops for control flow.

Example:

javascript

Copy code

```
if (x > 0) {  
    // do something  
} else {  
    // do something else  
}
```

Java:

Java supports similar control statements to JavaScript with syntax differences.

Example:

java

Copy code

```
if (x > 0) {  
    // do something  
} else {  
    // do something else  
}
```

Python:

Python utilizes indentation for block structure and supports if-else statements, while loops, for loops, and more.

Example:

python

Copy code

```
if x > 0:  
    # do something  
else:  
    # do something else
```

C++:

C++ control statements include if-else, switch, for, while, and do-while loops.

Example:

cpp

Copy code

```
if (x > 0) {  
    // do something  
} else {  
    // do something else  
}
```

Functions in JavaScript:

JavaScript:

Functions in JavaScript can be declared using the function keyword or using arrow functions (=>).

Example:

javascript

Copy code

```
function add(x, y) {  
    return x + y;  
}
```

```
let multiply = (x, y) => x * y;
```

Java, Python, C++:

Functions in Java, Python, and C++ are declared using the public (in Java), def (in Python), and function (in C++) keywords respectively.

Example (Java):

java

Copy code

```
public int add(int x, int y) {  
    return x + y;  
}
```

Example (Python):

python

Copy code

```
def add(x, y):  
    return x + y
```

Example (C++):

cpp

Copy code

```
int add(int x, int y) {  
    return x + y;  
}
```

These explanations and examples should give you a comprehensive understanding of these fundamental programming concepts across different languages.