

## PYTHON

```
# Variables
full_name = "Jane Hacker"
pi = 3.14

# lists ("Arrays" in JS)
names = ["John", "Paul", "G"]

# dicts (similar to "Objects")
translation = {
    "ola": "Hello",
    "oi": "Hi",
}

# For loops
for name in names:
    print("name:", name)

# While loops
x = 0
while x < 3:
    print("X:", x)
    x = x + 1

# If-statements
if full_name == "Jane":
    print("Hi, Jane!")
elif full_name == "Alice":
    print("Hey Alice")
else:
    print("Don't know you")

# Functions
def greeter(name):
    print("Hi", name)
greeter("Bob")

# Conjunctions
if age < 18 and drink == "beer":
    print("Too young kiddo")

if age > 18 or drink == "soda":
    print("Great choice")

# Class syntax
class User(BaseUser):
    def __init__(self, name):
        self.name = name
        self.logged_in = False
    def log_in(self):
        self.logged_in = True
user = User("janeqhacker")

# Making request (Synchronous)
response = requests.get("cnn.com")
data = response.json()
print("Resp:", data)
```

## JAVASCRIPT

```
// Variables
let fullName = "Jane Hacker";
const pi = 3.14;

// Arrays ("lists" in Py)
let names = ["John", "Paul", "G"];

// Objects (similar to "dicts")
let translation = {
    ola: "Hello",
    oi: "Hi",
};

// For loop
for (let name of names) {
    console.log("name:", name);
}

// While loops
let x = 0;
while (x < 3) {
    console.log("X:", x);
    x++;
}

// If-statements
if (fullName === "Jane") {
    console.log("Hi, Jane!");
} else if (fullName === "Alice") {
    console.log("Hey Alice");
} else {
    console.log("Don't know you");
}

// Functions
function greeter(name) {
    console.log("Hi", name);
}
greeter("Bob")

// Conjunctions
if (age < 18 && drink === "beer") {
    console.log("Too young kiddo");
}

if (age > 18 || drink === "soda") {
    console.log("Great choice");
}

// Class syntax
class User extends BaseUser {
    constructor(name) {
        this.name = name;
        this.loggedIn = false;
    }
    logIn() {
        this.loggedIn = true;
    }
}
let user = new User("janeqhacker");

// Making request (Asynchronous)
fetch("http://cnn.com")
    .then(response => response.json())
    .then(data => {
        console.log("Resp:", data);
    });
```

## VARIABLE DECLARATION

**let** Declare a variable (block)  
**const** Like **let**, cannot be reassigned.  
**var** *Legacy* — similar to **let**, unscoped.

## DOM MANIPULATION

```
// Creating elements
let p = document
    .createElement("p");
p.textContent = "New Paragraph";

// Inserting elements into page
let d = document
    .querySelector("#some_id");
d.appendChild(p);

// Fetching many elements
let allImages = document
    .querySelectorAll("img");

// Add a class to all images
for (let img of allImages) {
    img.classList.add("Thumb");
}
```

## ALTERNATE FUNCTION SYNTAX

```
let greeter = (name) => {
    console.log("Hi", name);
};
```

## DOM TERMINOLOGY

**DOM** Initially generated from HTML, the Document Object Model is the current state of the page in the browser.

**DOM traversal** Finding elements in the DOM with JS

**DOM manipulation** Modifying the DOM with JS

**event** An interaction with the DOM (most common: click)

## ASYNCHRONOUS TERMINOLOGY

**asynchronous** Instead of pausing ("blocking") for a slow operation, the asynchronous approach is to put-off starting the slow operation, then call a function ("callback") at a later time to signal it's done

**callback** A function passed as an argument to be called later when an event is triggered

**promise** Another popular way to do callbacks, with a **.then** syntax