
EVERYONE
CAN CODE!

Go4Tech

JavaScript 4 Beginners

AGENDA

- Intro into Programming & Programing fundamentals
- Exercises - with Mentors
- Challenges - with Mentors

https://go4tech-australia.github.io/javascript-4-beginners/demo/

Elements Console Sources Network Performance Memory Application Security Audits

game.js index.js

```
var myName = 'Go4Tech';
var snake = GAME.createSnake(myName);
var apple = GAME.createApple();
var gameSpeed = 3;
var score = 0;

var moveSnake = function(direction) {
    if (direction === 'down') {
        GAME.setDirectionForSnake('down');
    } else if (direction === 'up') {
        GAME.setDirectionForSnake('up');
    } else if (direction === 'right') {
        GAME.setDirectionForSnake('right');
    } else if (direction === 'left') {
        GAME.setDirectionForSnake('left');
    }
};

var gameRules = function() {
    if (GAME.detectCollisionBetween(snake.head(), snake.body())) {
        GAME.endGame('Woops! You ate yourself!');
    }

```

Line 1, Column 1

Watch
Call Stack — Not paused
Scope — Not paused
Breakpoints — No breakpoints
XHR/fetch Breakpoints
DOM Breakpoints
Global Listeners
Event Listener Breakpoints

Console What's New Search Rendering Quick source

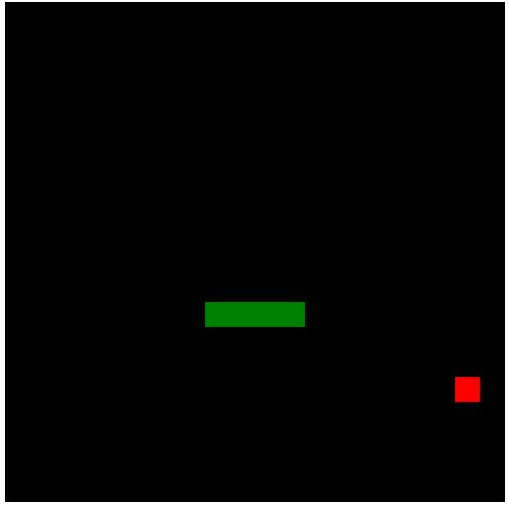
top Filter Default levels

game.js:234

```
  .d8888b.               d8888  88888888888               888
 d88P  Y88b             d8P888      888                   888
 888    888            d8P 888      888                   888
 888         .d88b.    d8P  888      888   .d88b.   .d8888b 88888b.
 888  88888 d88""88b d88   888      888  d8P  Y8b d88P"    888 "88b
 888    888 888  888 8888888888     888  88888888 888      888  888
 Y88b  d88P Y88..88P       888      888  Y8b.     Y88b.    888  888
  "Y8888P88  "Y88P"        888      888   "Y8888   "Y8888P 888  888
```

Github: https://github.com/go4tech-australia/javascript-4-beginners

Go4Tech — game.js:202
Go4Tech Score: 10 — index.js:32
Go4Tech Score: 20 — index.js:32



Player 1: Go4Tech

11:23 PM

AGENDA

- Intro into Programming & Programing fundamentals
- Exercises - with Mentors
- Challenges - with Mentors
- Wrap up & What's Next

WHAT IS PROGRAMMING?

WHAT IS PROGRAMMING?

Programing in its simplest term is

- writing instructions for a computer to action.


JS
gifs.com

JAVASCRIPT

JAVASCRIPT

- JavaScript is one of the most popular languages to learn

JAVASCRIPT

- JavaScript is one of the most popular languages to learn
- JavaScript is the language of the web

Facebook – log in or sign up

https://www.facebook.com

facebook

Email or Phone

Password

Log In

Forgotten account?

Facebook helps you connect and share with the people in your life.

Create an account

It's free and always will be.

First name

Surname

Mobile number or email address

New password

Birthday

30 Nov 1993

Why do I need to provide my date of birth?

Female Male

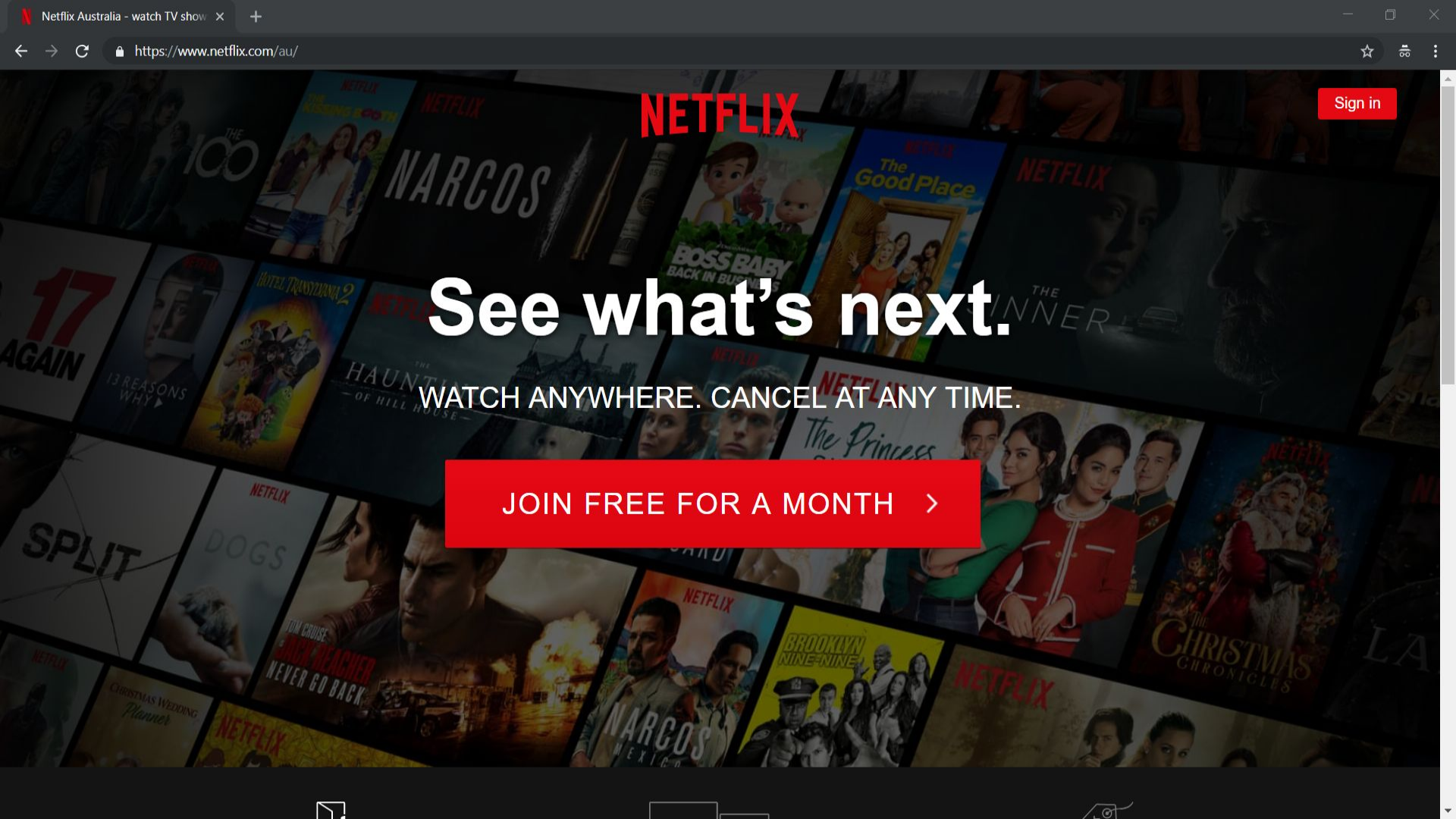
By clicking Sign Up, you agree to our Terms, Data Policy and Cookie Policy. You may receive SMS notifications from us and can opt out at any time.

Sign Up

Create a Page for a celebrity, band or business.

English (UK) 中文(简体) 한국어 日本語 Français (France) Español Deutsch Italiano Português (Brasil) العربية हिन्दी +

Sign Up Log In Messenger Facebook Lite Mobile Find Friends People Pages Page Categories Places Games Locations Marketplace Groups


Netflix Australia - watch TV show
https://www.netflix.com/au/
NETFLIX
Sign in
See what's next.
WATCH ANYWHERE. CANCEL AT ANY TIME.
JOIN FREE FOR A MONTH

Music for everyone - Spotify

https://www.spotify.com/au/

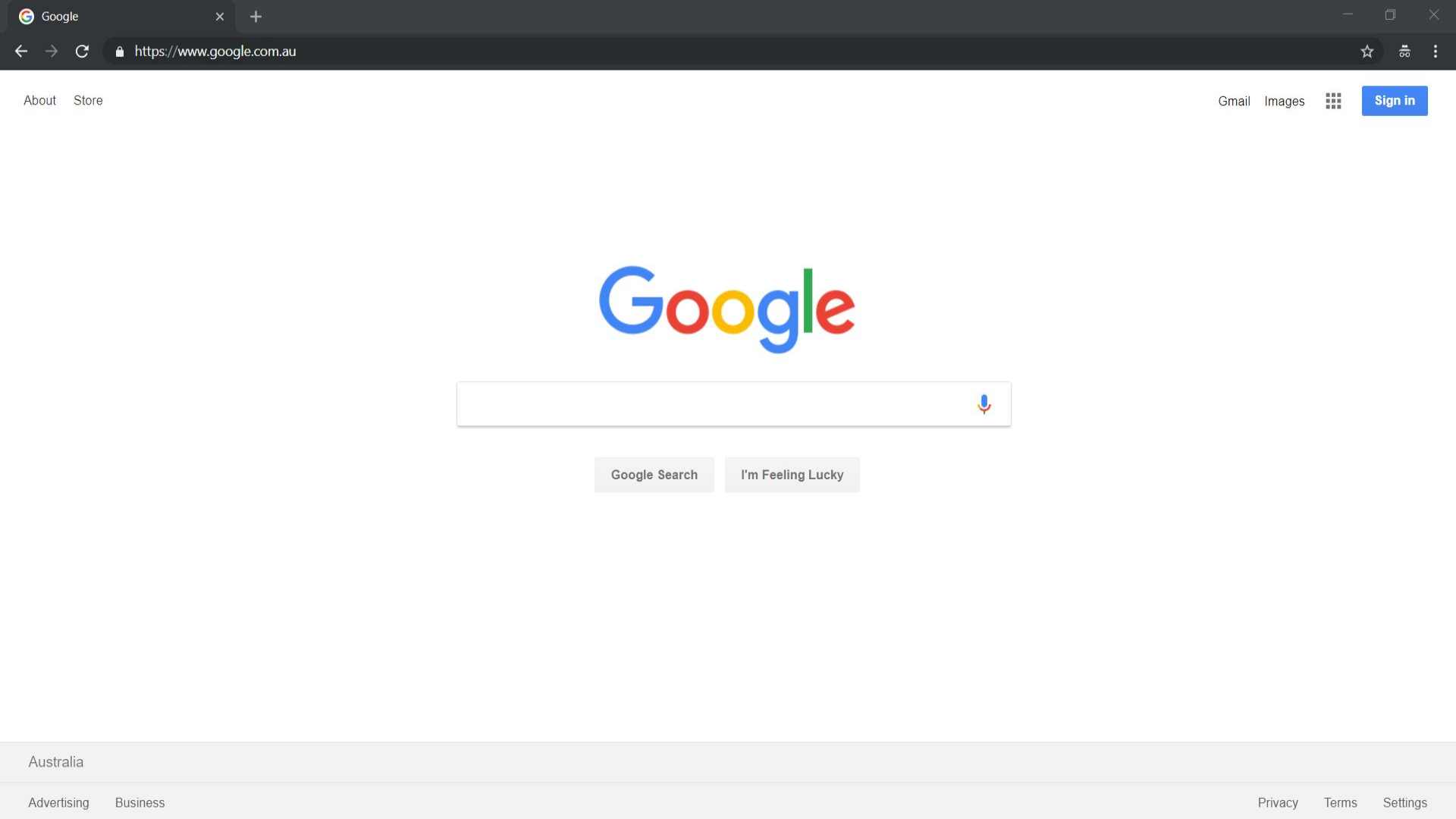
Spotify

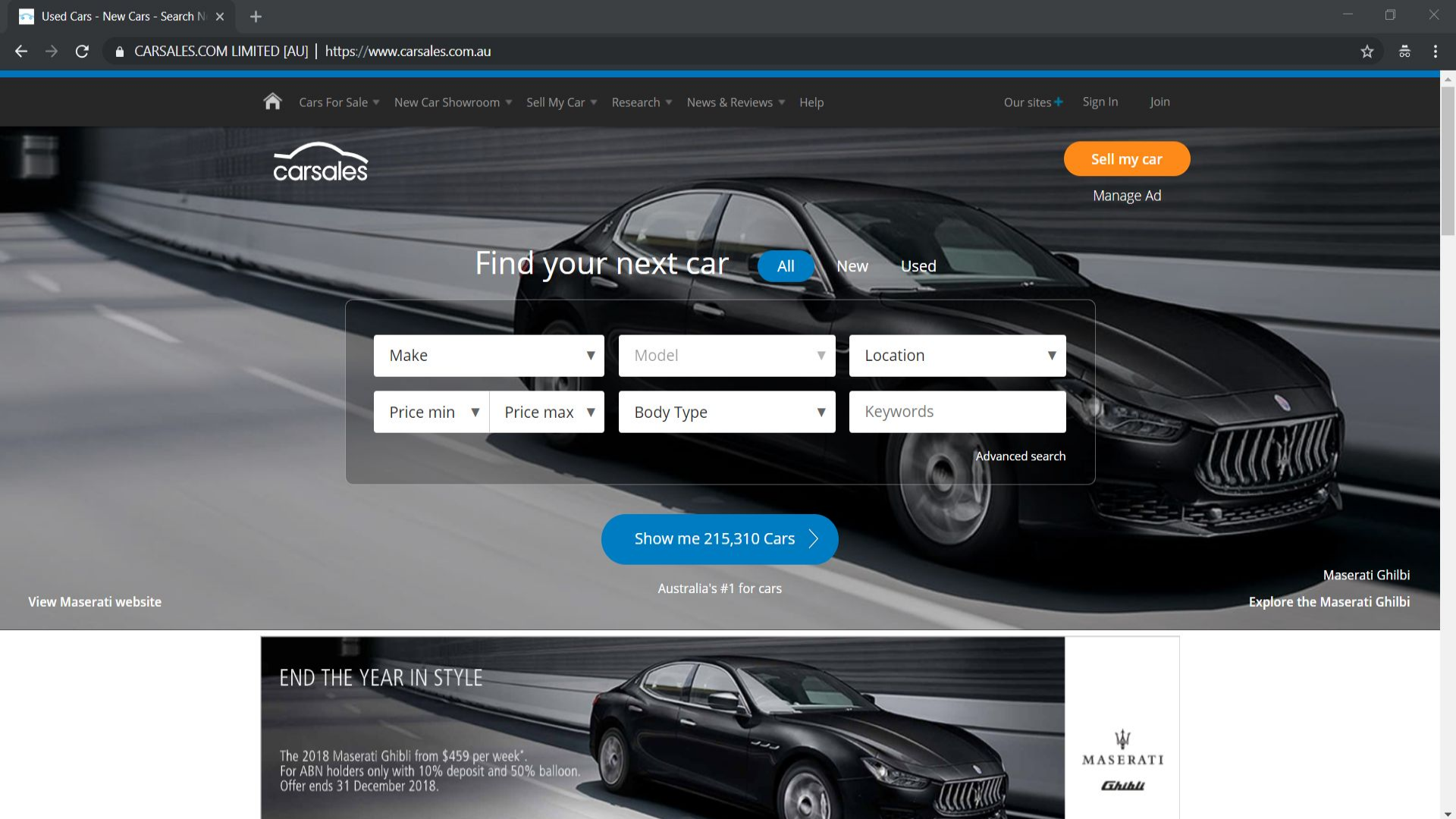
Premium Help Download | Sign up Log In

Music for everyone.

Millions of songs. No credit card needed.

GET SPOTIFY FREE


Google
https://www.google.com.au
About
Store
Gmail
Images
Sign in
Google
Google Search
I'm Feeling Lucky
Australia
Advertising
Business
Privacy
Terms
Settings


Used Cars - New Cars - Search N
CARSALES.COM LIMITED [AU] | https://www.carsales.com.au
Cars For Sale
New Car Showroom
Sell My Car
Research
News & Reviews
Help
Our sites
Sign In
Join
carsales
Sell my car
Manage Ad
Find your next car
All
New
Used
Make
Model
Location
Price min
Price max
Body Type
Keywords
Advanced search
Show me 215,310 Cars
Australia's #1 for cars
View Maserati website
Maserati Ghilbi
Explore the Maserati Ghilbi
END THE YEAR IN STYLE
The 2018 Maserati Ghibli from $459 per week*.
For ABN holders only with 10% deposit and 50% balloon.
Offer ends 31 December 2018.
MASERATI
Ghibli

JAVASCRIPT

- JavaScript is one of the most popular languages to learn
- JavaScript is the language of the web
- Every website you visit, either runs JS or has the ability to run JS

JAVASCRIPT

- JavaScript is one of the most popular languages to learn
- JavaScript is the language of the web
- Every website you visit, either runs JS or has the ability to run JS
- Works on a platform that interacts with billions of people per day

PROGRAMMING FUNDAMENTALS

FUNDAMENTALS

- Variables
- Functions
- Conditionals
- Loops

VARIABLES

VARIABLES

Variables are named values that can store any type of JavaScript value.
Variables store data.

VARIABLES

```
var name = "Phil";
```

And here's what's happening in the example above:

- `var` is the keyword that tells JavaScript you're declaring a variable.
- `name` is the name of that variable.
- `=` is the operator that tells JavaScript a value is coming up next.
- `"Phil"` is the value for the variable to store.

VARIABLES

Reassigning variables

EXAMPLE

```
var name = "Phil";
name = "Mai";
name;
```

OUTPUT

```
"Mai"
```

VARIABLES

Naming variables

Variable names are pretty flexible as long as you follow a few rules:

- Start them with a letter, underscore _, or dollar sign $.
- After the first letter, numbers, letters, underscores, or dollar signs are valid.
- Don’t use any of JavaScript’s reserved keywords.

Valid Names

```
var dinner2Go = "pizza";
var _Hello_ = "what a nice greeting"
var $_$ = "money eyes";
```

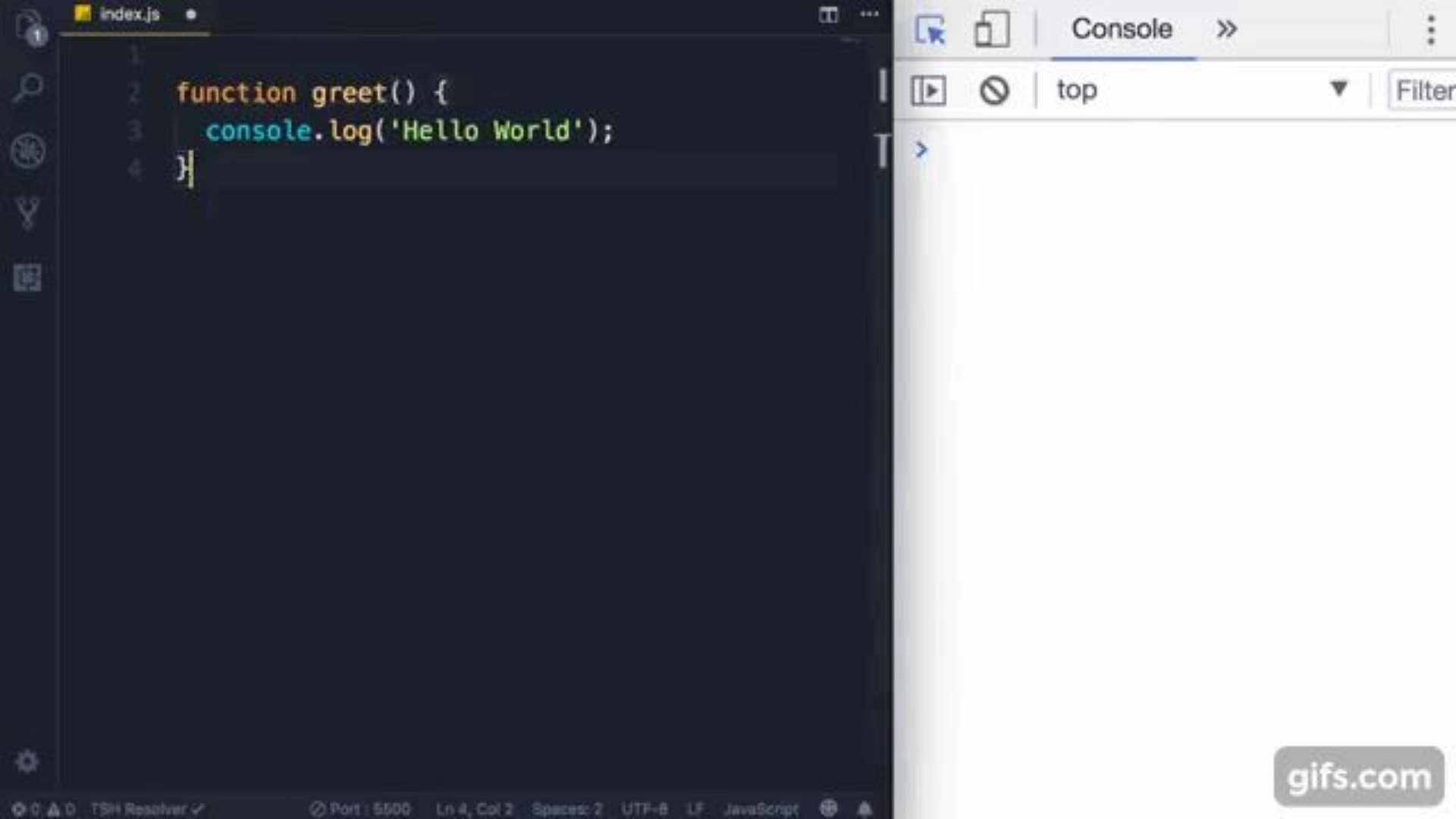
Invalid Names

```
var tot-al = 78;
var 2fast2catch = "bold claim"
var function = false;
```

FUNCTIONS

FUNCTIONS

Functions are blocks of code that can be named and reused. They are actions in our code.


index.js
function greet() {
console.log('Hello World');
}
Console
top
Filter
gifs.com

FUNCTIONS

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

There's a lot going on in the example above, so let's look at each part individually.

- `function` is the keyword that starts declaring a function.
- `addTwoNumbers` is the function's name, which is customizable like variable names.
- `(x, y)` are parameters, variable names for the inputs a function will accept.
- `return` is a keyword that exits the function and returns a value outside.

FUNCTIONS

Using functions

EXAMPLE

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

addTwoNumbers(1,2);
```

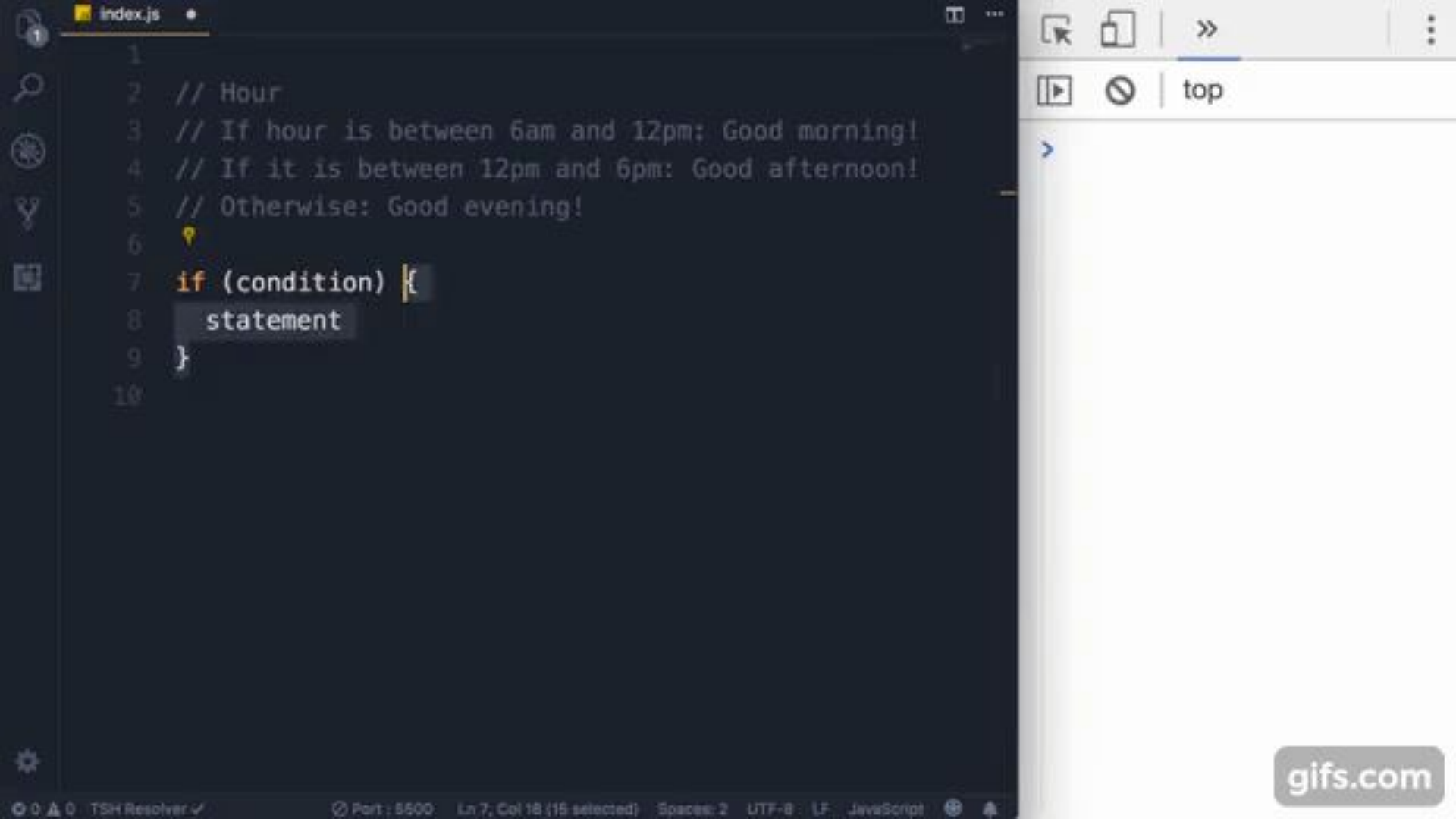
OUTPUT

```
3
```

CONDITIONALS

CONDITIONALS

Conditionals control behaviour in JavaScript and determine whether or not pieces of code can run. They are the decisions in our code.


index.js
// Hour
// If hour is between 6am and 12pm: Good morning!
// If it is between 12pm and 6pm: Good afternoon!
// Otherwise: Good evening!
if (condition) {
statement
}
top
gifs.com

CONDITIONALS

If

EXAMPLE

```
var outcome = “Go4Tech”

if (10 > 5) {
     outcome = "10 is greater than 5. This is assigned inside the if block";
}

alert(outcome);
```

OUTPUT

```
"10 is greater than 5. This is assigned inside the if block"
```

CONDITIONALS

Here's what's happening in the example:

- The keyword `if` tells JavaScript to start the conditional statement.
- `(10 > 5)` is the condition to test, which in this case is true `10` is greater than `5`
- The part contained inside curly braces {} is the block of code to run.

- Because the condition passes, the variable outcome is assigned the value:
  `"10 is greater than 5. This is assigned inside the if block"`

CONDITIONALS

else

EXAMPLE

```
if ("cat" === "dog") {
     var outcome = "Yes, cat is indeed a dog on steroids";
} else {
     var outcome = "Nope.";
}

alert(outcome);
```

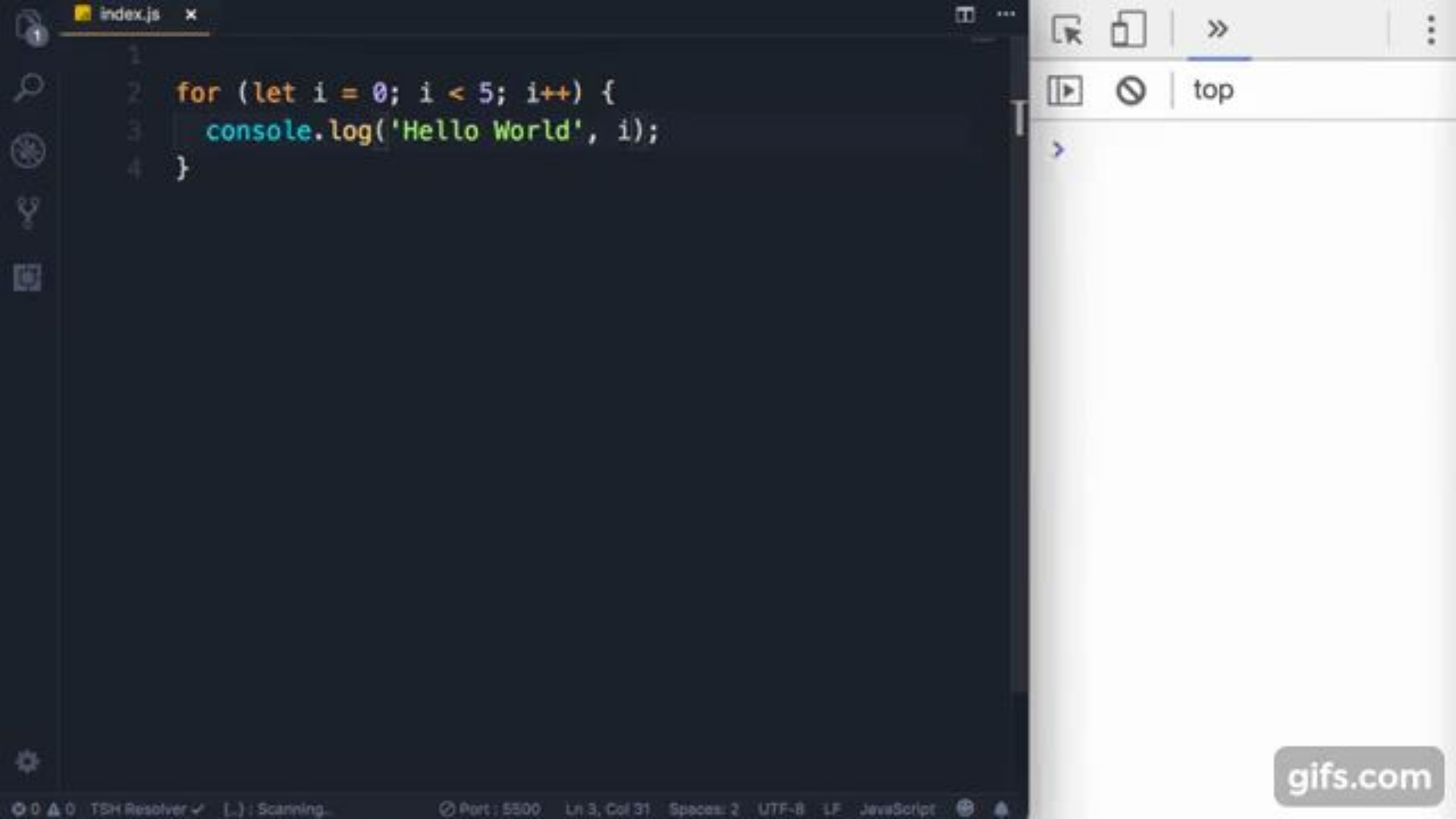
OUTPUT

```
"Nope."
```

LOOPS

LOOPS

Loops offer a quick and easy way to do something repeatedly.


index.js
for (let i = 0; i < 5; i++) {
console.log('Hello World', i);
}
top
gifs.com

LOOPS

```
for (var i = 0; i < 5; i = i + 1) {
    // Runs 5 times, with values of i equal to 0 through 4
    console.log('Hello World: ' + i);
}
```

There's a lot going on in the example above, so let's look at each part individually.

- `var i = 0;` is the starting value.
- `i < 5;` is the condition.
- `i = i + 1` is the incrementor

LOOPS

EXAMPLE

```
for (var i = 0; i < 5; i = i + 1) {
    // Runs 5 times, with values of i equal to 0 through 4
    console.log('Hello World: ' + i);
}
```

OUTPUT

```
'Hello World: 0'
'Hello World: 1'
'Hello World: 2'
'Hello World: 3'
'Hello World: 4'
```

FUNDAMENTALS

- Variables - Storage
- Functions - Actions
- Conditionals - Decisions
- Loops - Repetition

EXERCISES

go4tech-australia.github.io/javascript-4-beginners/Exercises

CHALLENGES

go4tech-australia.github.io/javascript-4-beginners/Challenges

WRAP UP

JAVASCRIPT

JAVASCRIPT

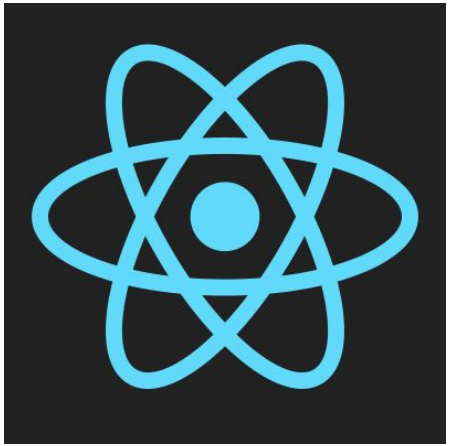
- Frontend Development (HTML, CSS, JS)

JAVASCRIPT

JAVASCRIPT

- Frontend Development (HTML, CSS, JS)
- Frontend Frameworks (Angular, React, Vue)

JAVASCRIPT



JAVASCRIPT

- Frontend Development (HTML, CSS, JS)
- Frontend frameworks (Angular, React, Vue & more)
- Backend Development (Node.js)

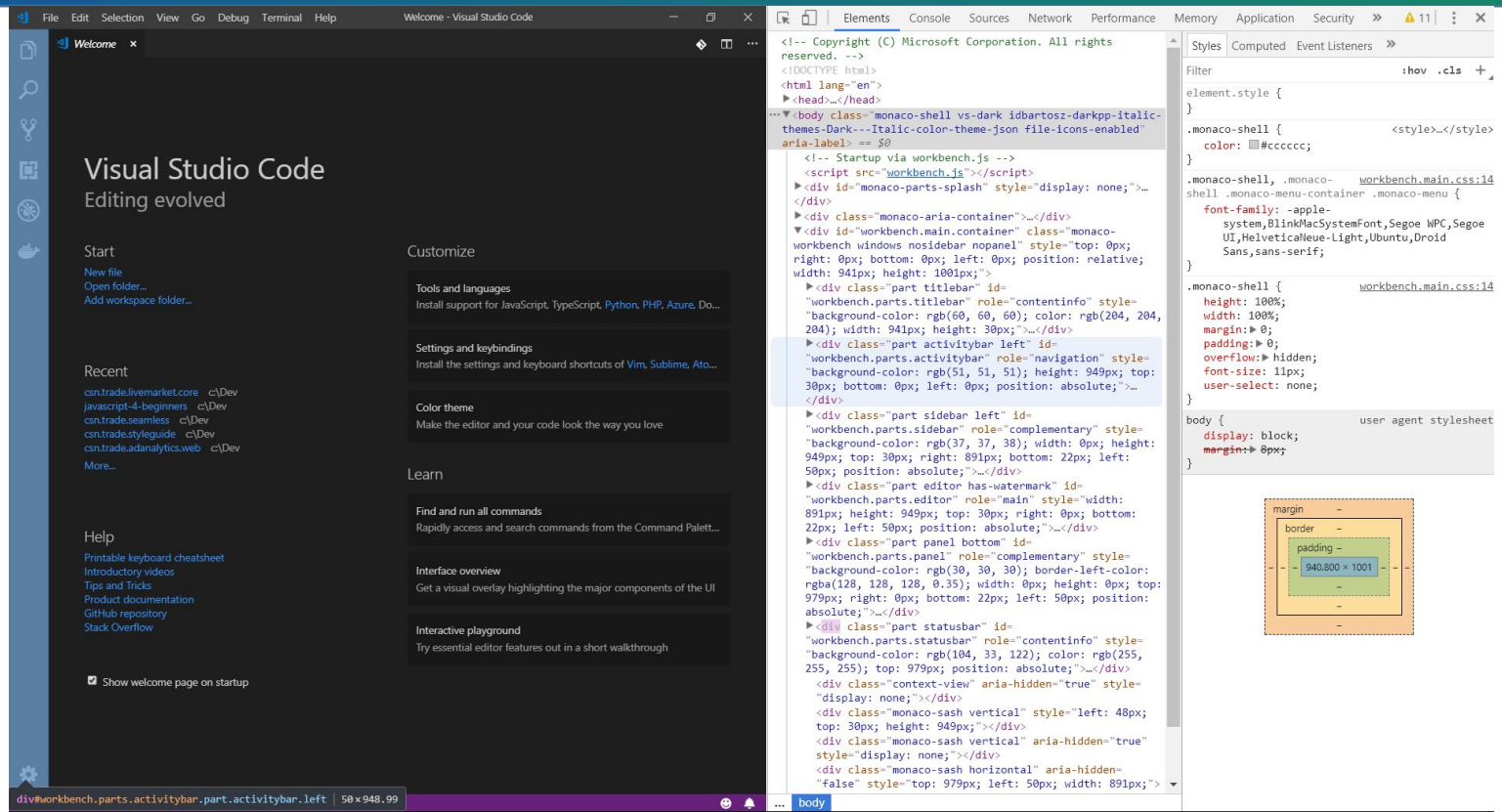
JAVASCRIPT

JAVASCRIPT

- Frontend Development (HTML, CSS, JS)
- Frontend frameworks (Angular, React, Vue)
- Backend Development (Node.js)
- Desktop (Electron, NW.js)

JAVASCRIPT

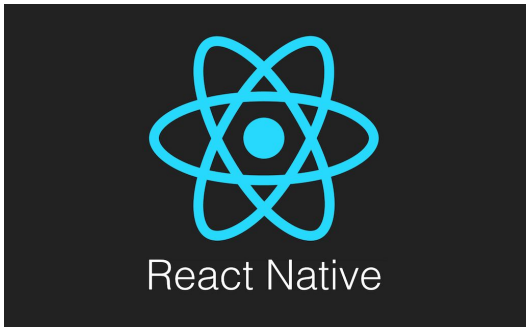
JAVASCRIPT


File Edit Selection View Go Debug Terminal Help
Welcome - Visual Studio Code
Welcome
Visual Studio Code
Editing evolved
Start
New file
Open folder...
Add workspace folder...
Recent
csn.trade.livemarket.core c:\Dev
javascript-4-beginners c:\Dev
csn.trade.seamless c:\Dev
csn.trade.styleguide c:\Dev
csn.trade.adanalytics.web c:\Dev
More...
Help
Printable keyboard cheatsheet
Introductory videos
Tips and Tricks
Product documentation
GitHub repository
Stack Overflow
Show welcome page on startup
Customize
Tools and languages
Install support for JavaScript, TypeScript, Python, PHP, Azure, Do...
Settings and keybindings
Install the settings and keyboard shortcuts of Vim, Sublime, Ato...
Color theme
Make the editor and your code look the way you love
Learn
Find and run all commands
Rapidly access and search commands from the Command Palett...
Interface overview
Get a visual overlay highlighting the major components of the UI
Interactive playground
Try essential editor features out in a short walkthrough
div#workbench.parts.activitybar.part.activitybar.left | 50×948.99
Elements Console Sources Network Performance Memory Application Security
Styles Computed Event Listeners
Filter :hov .cls
element.style {
}
.monaco-shell { <style>…</style>
color: #cccccc;
}
.monaco-shell, .monaco-shell .monaco-menu-container .monaco-menu { workbench.main.css:14
font-family: -apple-system,BlinkMacSystemFont,Segoe WPC,Segoe UI,HelveticaNeue-Light,Ubuntu,Droid Sans,sans-serif;
}
.monaco-shell { workbench.main.css:14
height: 100%;
width: 100%;
margin: 0;
padding: 0;
overflow: hidden;
font-size: 11px;
user-select: none;
}
body { user agent stylesheet
display: block;
margin: 8px;
}
margin
border
padding
940.800 × 1001
body

JAVASCRIPT

- Frontend Development (HTML, CSS, JS)
- Frontend frameworks (Angular, React, Vue)
- Backend Development (Node.js)
- Desktop (Electron, NW.js)
- Mobile Apps (React Native, NativeScript, Ionic)

JAVASCRIPT



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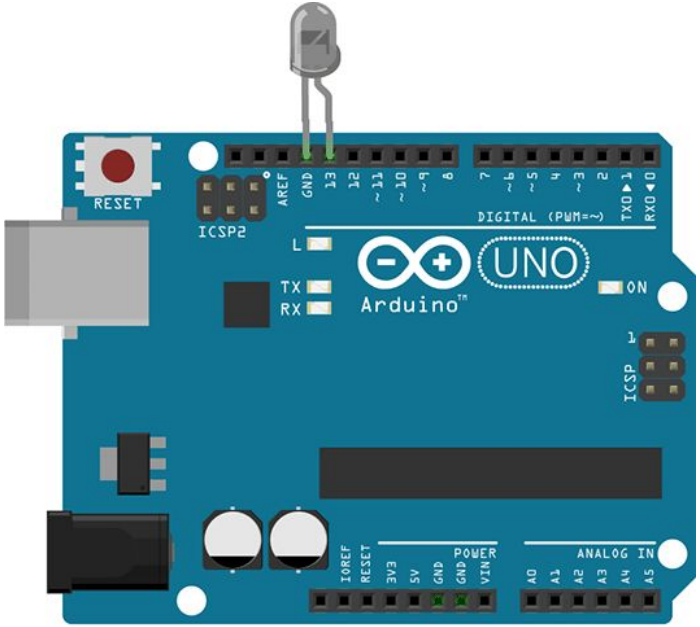
- IoT (Ardunio)

JAVASCRIPT


RESET
ICSP2
AREF
GND
13
12
~11
~10
~9
8
7
~6
~5
4
~3
2
TX→1
RX←0
DIGITAL (PWM=~)
L
TX
RX
UNO
Arduino™
ON
ICSP
POWER
IOREF
RESET
3V3
5V
GND
GND
VIN
ANALOG IN
A0
A1
A2
A3
A4
A5

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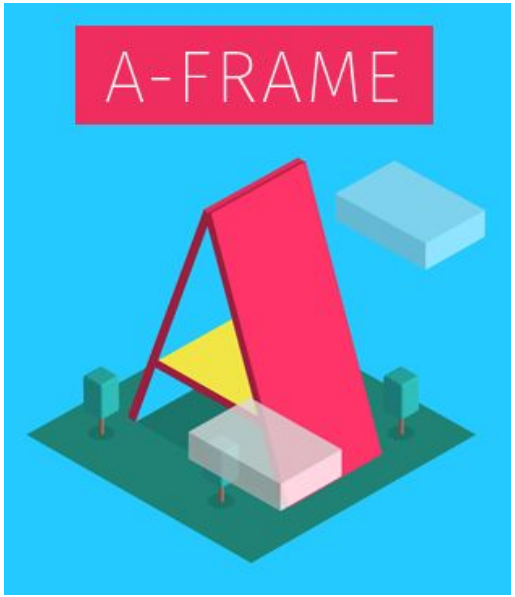
- IoT (Ardunio)
- VR & AR

JAVASCRIPT



JAVASCRIPT

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- IoT (Ardunio)
- VR & AR
- Machine Learning (TensorFlow)

JAVASCRIPT

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- Frontend Development (HTML, CSS, JS)
- Frontend frameworks (Angular, React, Vue)
- Backend Development (Node.js)
- Desktop (Electron, NW.js)
- Mobile Apps (React Native, NativeScript, Ionic)
- IoT (Ardunio)
- VR & AR
- Machine Learning (TensorFlow)
- And more...

PROGRAMMING + YOU

PROGRAMMING + YOU

WHAT'S NEXT

Going 4 Tech Checklist

- [x] **Attend the Javascript workshop** to get a taste of what it's like to code (DONE!)
- [ ] **Find a mentor.** We can help with this! This person will support you on your coding journey (you are more motivated to learn when there is someone supporting you)
- [ ] **Review your learnings!** Try experimenting with the code you wrote and see what you can do.
- [ ] **Continue your journey.** There are a huge range of online resources you can use. For a list, check out go4tech-australia.github.io/javascript-4-beginners/Resources
- [ ] **Ready for the next step?** Take a course with General Assembly, Le Wagon or Academy XI. Le Wagon offers a free 1-day trial of their world-class course!
- [ ] **Use your skills in everyday life.** Apply your learned skills in your current job by creating small scripts to automate everyday repetitive tasks
- [ ] **Ready to go full tech?** If this is of interest to you, approach the friendly P&C for opportunities within Carsales tech teams!

WHAT'S NEXT

https://www.lewagon.com/

THANK YOU