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# JavaScript Full-Stack Bootcamp

# General information

## Outcomes:

Become a web/mobile developer with the most in-demand skillset

## Get a job

As most of our students take this course to change their career and start working as developers this outcome is definitely one of the most popular and important. Through our network of hiring partners we help graduates to **get their first developer's job on average in 1-2 months** after the end of the bootcamp.



Most of our hiring partners are medium-sized tech companies located in Barcelona and/or Spain. Some of them are in other EU countries. Through international HR companies we can also help to get a job outside of Europe.

Of course graduates are free to apply directly to any job openings outside of our hiring partners network. A lot of students get invited to their first interviews even before the end of the bootcamp due to high demand for developers with the skills and tools we teach at BCS.

## Freelancing

Another amazing opportunity for our graduates – if you thinking about starting a freelance career or already freelancing the skills you get during the bootcamp would take you to another level. Being able to **create 100% custom apps for your clients** increases your value as a freelancer dramatically. With programming being truly universal language you can work for clients all around the world being literally at any location at the same time.

Some of our graduates actually built their first projects for their clients as a course project!

## Creating your app

Since you will build at least 2 projects during the course – a web application, which is a website with a lot of functionality, like eCommerce website for example, and a native mobile app for iOS and Android – you will have skills and deep understanding of how any app is built. From here you can start coding you app you've been thinking about.

If you are **founder, project manager, product owner** – this bootcamp will give you an insight into technical side of the process. You will know not only how to code the app but also how to search, test, control, manage, track your developers team. You will be able to speak with them in the same language.





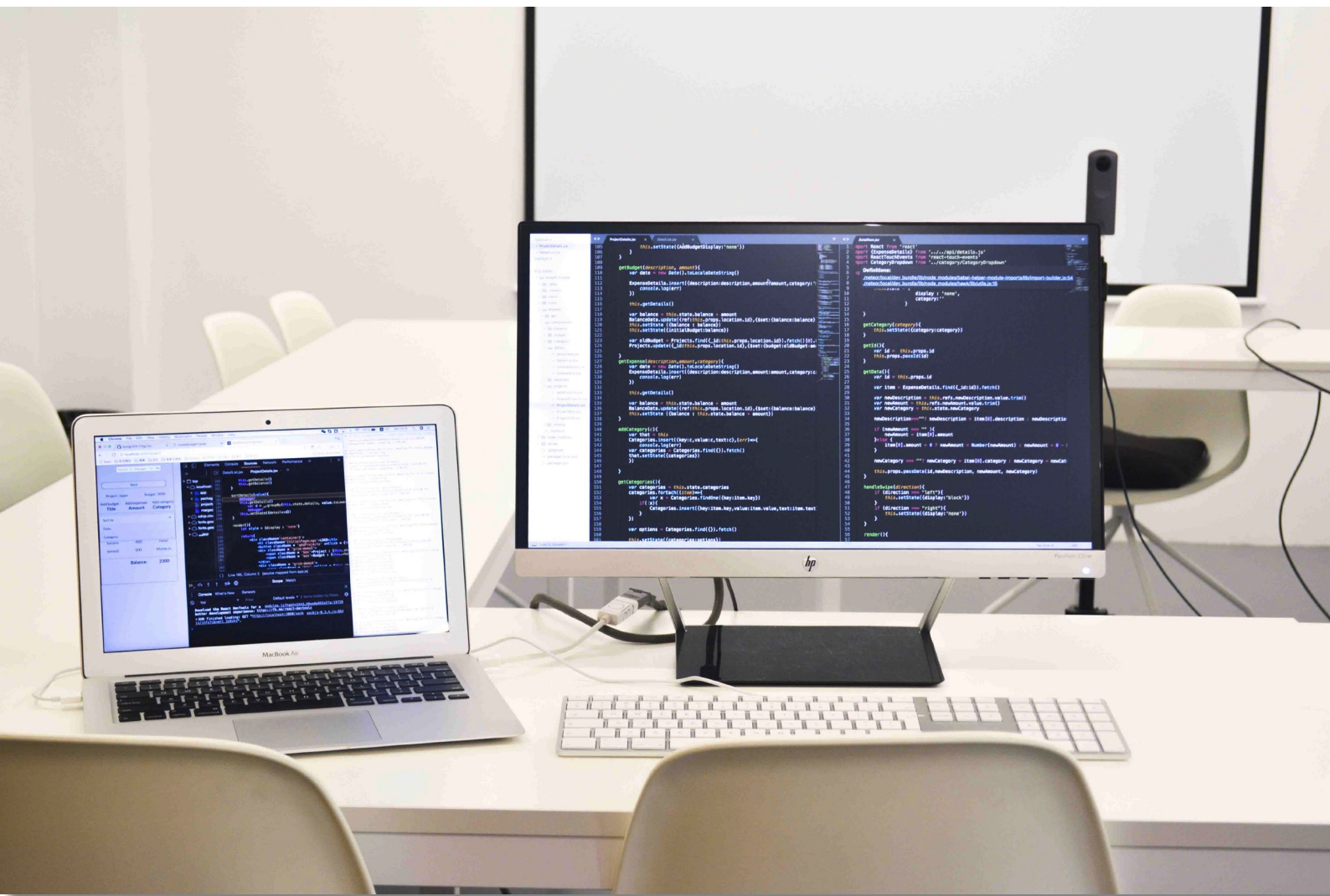
## Course data:

The course is in **English**. The reason is that generally speaking, English is de-facto language of the programming and **most of tech companies**, even in **Barcelona**, use **English as the default language**.

The **in-person** bootcamp length is **9 weeks, Monday–Friday, 8 hours per day**. The **online** bootcamp length is **9-16 weeks** with hours per day ranging from 8 to 4.

Laptop – you will need a computer to do the course. It can be **Mac, Windows or Linux**. We think Mac is the most preferred one. Everything will work and run on either of them, the difference is mainly in the ease of use for coding.

Don't buy a new laptop with different operating system just for the sake of the bootcamp, since on top of learning programming you will have another learning curve to get comfortable with the unfamiliar operating system. On the other hand, if you don't have any laptop yet or thinking to get a new one anyway, then go for Mac. The most affordable MacBook Air would be sufficient.



# Syllabus

## Part 1: HTML, CSS, modern responsive web design

### Week 1

#### HTML5, CSS3, Grid, Flexbox, responsive web design

During this week you will learn all the skills and best practices for using HTML and CSS to create a logical, clean and responsive layouts for your future website and apps. We are going to use the latest CSS version.

Students are going to complete at least two cloning projects first and after that start working on their portfolio website which will be used during the job hunt to showcase the apps they will build during the bootcamp.

The following skills are crucial to be able to layout your websites/apps for any devices such as different screen sizes, operating systems and browsers.

#### Topics include:

- DOM
- Server side vs client side
- Browser-based development
- Semantic HTML
- Responsive web design
- Git / GitHub
- Project: Single page website
- Project: Multipage website
- Project: Your personal portfolio page to be used in the job hunt process later

```
<section id="top">
  <h1>Dear GF</h1>
  <nav>
    <ul>
      <li><a href="#location">Location</a></li>
      <li><a href="#gallery">Gallery</a></li>
      <li><a href="#products">Products</a></li>
      <li><a href="#team">Team</a></li>
    </ul>
  </nav>
  <div class="hamburger">
    <span>|||</span>
    <div class="hamburger-content">
      <li><a href="#location">Location</a></li>
      <li><a href="#gallery">Gallery</a></li>
      <li><a href="#products">Products</a></li>
      <li><a href="#team">Team</a></li>
    </div>
  </div>
</section>

<section id="splashscreen">
  <h1>Dear GF: gluten free bakery shop</h1>
  <p>The best cookies and muffins in town</p>
  <a href="#products"><button>Discover our products</button>
</section>

<section id="location">
  <h1>Best location</h1>
  <a href="#top">Top</a>
  <iframe src="https://www.google.com/maps/embed?pb=!1m18!1m12!1s54!2d2.1566380146896913!3d41.39233150365292!2m3!1f0!2f0!3f0!3m!3m3!1m2!1s0x12a4a29194a60e4f%3A0xa3f0e1fe3c20c31a!2sJansana%2Bakery!5e0!3m2!1ses!2ses!4v1678704715981!5m2!1ses!2ses" width=
style="border:0;" allowfullscreen="" loading="lazy" referrerp
```

# Part 2: JavaScript

## Weeks 2-3

### JavaScript, testing

Being able to program with pure JavaScript is crucial for this course since all the libraries and frameworks we are going to use are essentially based on JavaScript but with higher level of abstraction. That's why we want to make sure that students are comfortable enough with writing pure JS and solving real world challenges with it.

These two weeks are done in a format of lectures in the morning and lots of exercises to practice after that. With our testing tools students can see if their solution passes the test or not. During this time you will actually learn how to program and understand the logic of programming.

#### Topics include:

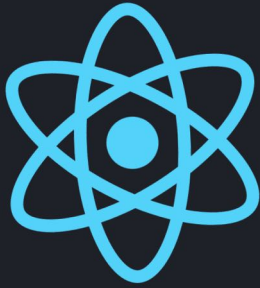
- Intro to JavaScript
- Running JS in the console
- Programming logic
- Algorithmic approach
- Working with variables
- Understanding data types in JavaScript
- Built-in methods of JavaScript
- Working with collections
- Loops
- Conditionals
- Functions
- Objects
- ES6
- Advanced JavaScript practice
- Constructors
- Classes
- Prototypes
- Scope
- Recursion
- Async
- Promises
- Closures



# Part 3: React.js

## Week 4

### Front-end development



Edit `src/App.js` and save to reload.

[Learn React](#)

During this week you will have a lot of fun and excitement while learning React.js. This amazing library is the **current leader on the job market** and **most loved tool among web developers** to build fast, powerful and lightweight applications. This library is created and maintained by Facebook.

You will start to build client web apps and see the results right away!

#### Topics include:

- Intro to React.js
- Components
- State
- Props
- Lifecycle
- Hooks
- Class vs function components
- Conditional rendering
- Asynchrony
- Events
- React Router
- Reusable components
- External components
- Global state
- Suspense
- Deployment of React apps



# Part 4: Express

## Week 5

### Back-end development

This week is all about a back-end. You will learn the most used **server-side library** – Express – and non relational **database** MongoDB while starting to build a back-end for your web app. You will build several **servers** and understand the data flow between server – client and external APIs.

#### Topics include:

- Intro to Node
- Understanding server-side development
- Express
- MongoDB
- MVC
- Server's architecture
- User authentication
- Mail server
- Cards payments processing
- Building back-end app with Node, Express and MongoDB

```
1  const express = require('express'),
2      app = express(),
3      mongoose = require('mongoose'),
4      todosRoute = require('./routes/TodosRoute')
5
6  // to print incoming requests from mongoose in the terminal
7  mongoose.set('debug', true)
8  // ===== setting to use the body of a request =====
9  app.use(express.urlencoded({extended: true}))
10 app.use(express.json())
11
12 // connecting to mongo and checking if DB is running
13 async function connecting(){
14   try {
15     await mongoose.connect('mongodb://127.0.0.1/newdatabase')
16     console.log('Connected to the DB')
17   } catch ( error ) {
18     console.log('ERROR: Seems like your DB is not running, please start it up !!!');
19   }
20 }
21 // end of connecting to mongo and checking if DB is running
22
23 // routes
24 app.use('/todos', todosRoute);
25 // Run "connecting" function and then set the server to listen on port 4000
26 connecting().then(()=>{
27   app.listen(4000, () => console.log(`listening on port 4000`))
28 })
```



# Part 5: Project #1

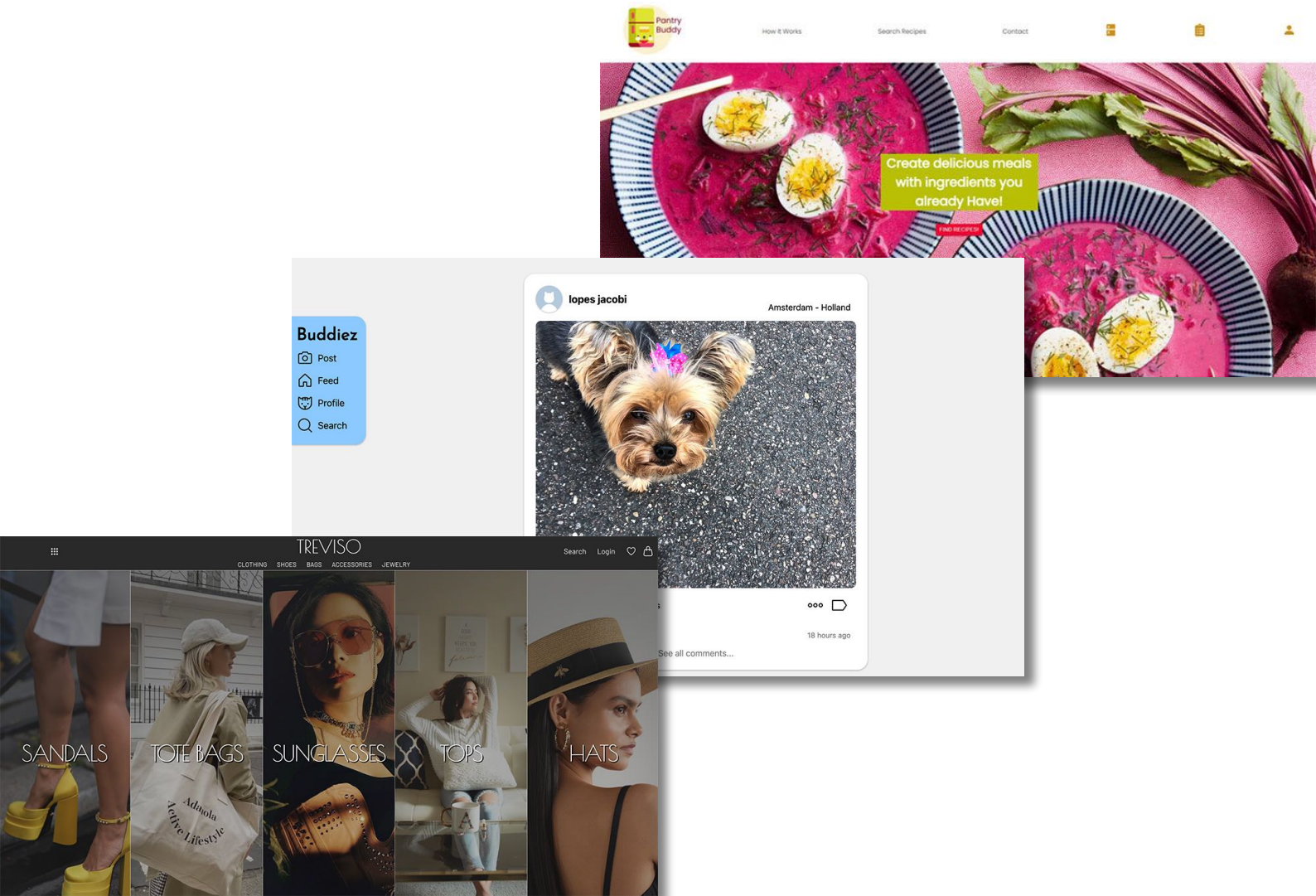
## Weeks 6-7: full-stack web app

### Project: full-stack web app with React.js, Express, MongoDB, HTML, CSS

During these week you will build a fully functioning web application which uses entire stack and many reusable components for your future projects. You will learn how to **code web applications** of any difficulty from scratch.

#### Some of the functionality for an example eCommerce project:

- Authentication
- APIs
- Admin area with info on products and orders
  - Add products
  - Remove products
  - Update products
- Add to cart (guest purchase)
- Display updatable cart
- Checkout page
- Card payments with Stripe API
- Accounts (admin and users)
- User page:
- Orders
- Favourites
- Search and filtering products (by categories, min and max price etc...)
- Email notifications
- Order statuses



# Part 6: React Native

## Weeks 8-9: Project #2

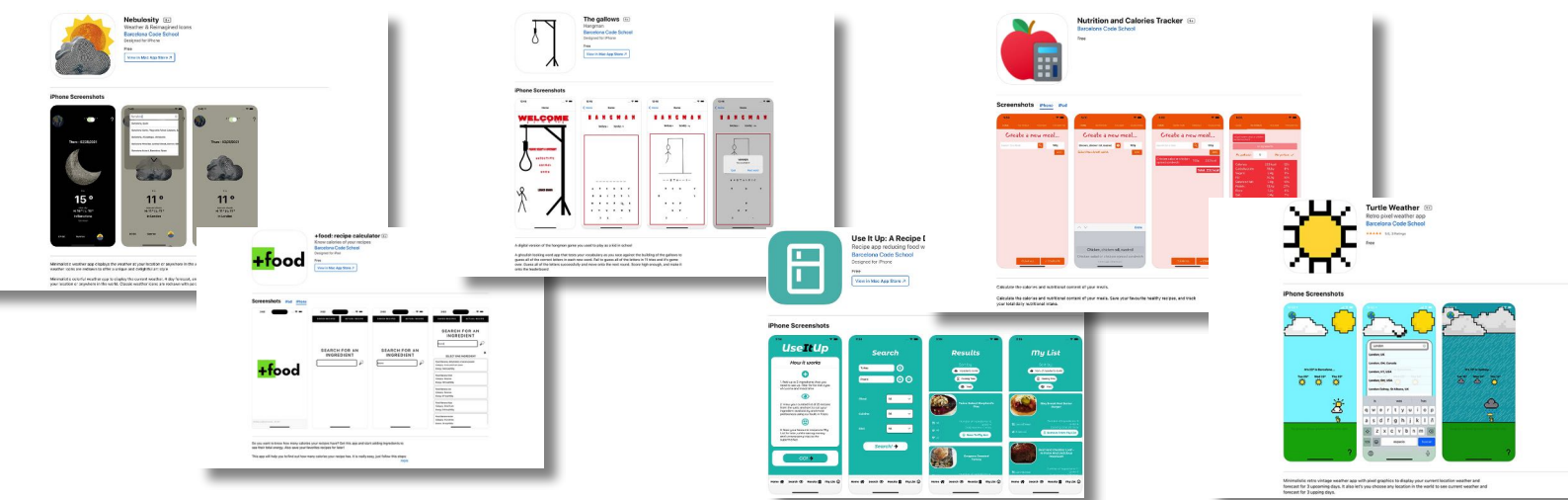
### Mobile apps development: React Native, Node, Express, MongoDB

By the end of these last 2 weeks you will have created a **native mobile app** working on **iOS** or **Android** with React Native which would be a fully functioning app and might include user authentication, persistent data updated in real time on all devices connected to their server, consuming external APIs.

This part is one of the most exciting where you learn React Native which is a library created to allow us to develop native mobile apps for both platforms – iOS and Android – by using same familiar JavaScript and React. So React Native is a natural progression after React.js.

Thanks to React Native we can forget about Swift, Kotlin or Java and focus on one language – JavaScript – to get a deeper understanding of it.

The final project of mobile app created with all the stack learned. Developing, testing, deployment and publishing to App Store or Google Play. You can choose from our suggested projects or build your own app.



Feel free to check some of the projects our students built during the bootcamp

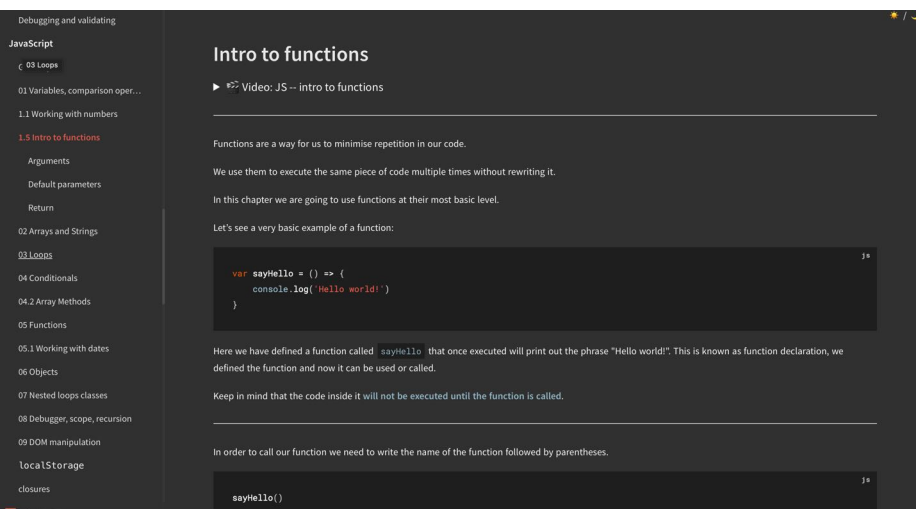
# Student's Info

## What to expect after the course

Upon successful completion of the bootcamp you will be able to build web and mobile applications. You will be prepared to start an entry level developer's job, begin freelancing or build you own apps.

## Curriculum

Barcelona Code School Full-stack JavaScript Bootcamp curriculum is focused on the latest tools and technologies in modern web application development. We are the only code school in Barcelona to offer deep insight into React Native library.



We carefully monitor and update our program based on latest and best technology trends and actual demand on the job market.

We do care a lot about encouraging students to learn and research so they would be prepared for the dynamic and quickly changing environment of the development scene.

We have a firm believe in JavaScript potential as the present and future of dynamic real-life applications which is backed by annual market and industry reviews and survey.

## Why JavaScript

JavaScript is by far the most popular and widely supported language which is isomorphic and can run both on server and client side. With JavaScript you can build native mobile apps for iOS and Android, as well as for web.

We see a strong growth of demand for faster and function richer applications and JavaScript is able to satisfy it. This means that JavaScript experts are and will be in high demand on a job market.

By focusing on React versus outdated frameworks such as Angular, we help students to be more job ready and put them into a better position since progressively more companies are choosing React. Thus, the demand for this framework, used by Facebook and Instagram among others, is only going to grow.

## Keeping up with the program

We imply that all of our students are coming with little or zero professional coding experience. So we start from scratch and take you to the level where you can apply for the entry level developer's job. The bootcamp is challenging, so be prepared to focus 100% on it. Please bear in mind that after signing up you will receive a list of **recommended pre-course materials** to do before the bootcamp. Those materials are focused on basics of HTML, CSS and JavaScript and by doing them first you will help yourself greatly to finish the bootcamp successfully.

We use a student driven approach and try to help everybody to succeed with active learning strategies where lectures and topics could be complemented or replaced based on the pace and needs of the students.

Another important value is competency-based education, there we try to determine the key skills and techniques you need to acquire in order to progress further.

## Job support

Learning coding is a long path with a lot of skills and experience obtained during long hours of working on your projects, debugging, trying and failing before succeeding. It will be a hard and difficult journey but the reward could be unbelievable. We work hard to bring as much job offers as possible.

So far we have job offers coming from the European companies on the rolling basis and the number of them is far higher than the number of graduates. In this manner all the graduates get access to more than one job offer.

We also strive to provide the opportunity of internships in partner companies to let our graduates have a real word experience of working with seasoned developers in a team.

Some students might find it interesting to stay with us after the graduation and have an internship as an assistant instructors or work on some projects coming from our web dev lab.



## Before the bootcamp

You will receive your student documents with terms and conditions and invoices. We will also ask you to fill out the student details form to know more about you and understand better your goals and background.

We will send you the pre-course materials required to be completed before starting the bootcamp. This pre-course could take around 40 hours to finish depending on your previous knowledge of HTML, CSS or JS and your individual pace of learning.

We will send you a reading list with materials to study before, during and after the bootcamp. While we are focusing on complete beginners, there is no doubt that coming more prepared will help you tremendously to learn much more things during the bootcamp.

Finally we will send you the invitation to our GitHub workspace containing all the materials and Slack community where you would communicate to all the students and instructors to share code, comments, news and everything else.

## During the bootcamp



Once the bootcamp starts you have to be ready to work hard and be present both physically and mentally. The amount of information you will receive is enormous so it will take a lot of effort for you to comprehend it and for us to provide it in accessible way.

The workflow during the course would involve three main components: lectures, exercises, real life projects.

Thus we ensure that you not only know the theory part or being able to follow the exercises but also try to implement new skills in different projects. It will prepare you better for all kinds of challenges you might face as a developer.

We have developed a way to make sure that the entire group is moving along with the

curriculum and nobody is left lagging behind simultaneously providing a space to move faster for students who are ready to take more advanced challenges and in depth material.

Our main goal is to make sure that everyone gets a solid understanding of fundamentals behind full-stack development in general so that at any point students would be able to learn new tools and technologies and don't be scared to approach unfamiliar libraries or frameworks.

## After the bootcamp

We are striving to keep on our relationships with students after the graduation from the bootcamp and here we have several possibilities to talk about.

If you will work on some personal projects we will always be there to help you and support you.

We also welcome our graduates to join our internship program as technical assistants for the following cohorts to help new students with their struggle and at the same time improve their own skills since teaching is the best they to learn something.

By joining our graduates community you will be always the first we contact when receiving job offers or project requests from the local companies.





# Housing

## Area

Barcelona Code School is located in one of the best zones of Barcelona, in the centre of a downtown district which is safe, pleasant and has the best infrastructure.

For housing apart from AirBnB and booking.com make sure to check:

- Uniplaces (use UP25BCS promo code to get 25% discount),
- Spotahome
- Barcelona home
- Wow Hostel Barcelona
- Umma Barcelona

In case it looks like there is not availability for this duration we'd advice to email them directly and ask, they might find something but maybe you will have to switch rooms at some point during your stay.

Also try this search around school, there seem to be a lot of options <https://www.google.com/maps/search/hostel/@41.3951837,2.143977,16z/data=!3m1!4b1!4m6!2m5!5m4!5m3!1s2022-03-14!4m1!1i2>



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