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Technologies used

# Introduction

Within this documentation, the technologies used throughout this app will be explained. Throughout each step of the project, a different technology was used. Below is an explanation of what was needed and when it was used.

# Technologies used

Throughout the making of the paperless app, several technologies were needed.

## Front-end Framework

For the front-end framework we used bootstrap 4. Bootstrap 4 is a free front-end framework for easier and faster web development. This includes HTML and CSS based templates for many different designs. Bootstrap also gives the user the ability to easily create a responsive design. A responsive design is about creating a web page that responds automatically to adjust themselves to look appropriate on all devices ranging from mobile devices to desktop computers.

We used bootstrap because if the waiters would be using either a tablet or mobile device to create orders then the view for each of the different devices would be similar in layout. With the automatic response the view would not be affected by what device it is being viewed on. It will be the same throughout the restraint because the kitchen view maybe displayed on a bigger deice so that the kitchen staff can view it easily. Then within the admin view, this may be displayed on a desktop device, so the view would be automatically adjusted.

## Back-end Framework

For the back-end framework we used a variety of applications. Node.js, express and various other modules all working cohesively to provide back-end support for the application.

Node is designed to build scalable network applications. Many connections can be handled concurrently. Upon each connection the call back is fired, but if there is no work then node will sleep.

Express is an open source minimal and flexible Node.js web application framework that provides a robust set of features for web and mobile applications.

We used these different modules to develop a link between each view. We used various events and call backs so that is why node.js and express was used.

## Database management system

For the database management system, we used MongoDB. MongoDB is a cloud-hosted database service. MongoDB **stores data in flexible, JSON-like documents**, meaning fields can vary from document to document and data structure can be changed over time. MongoDB is free and open-source

We used MongoDB as our database source because it is open-source and works with JSON documents with JavaScript being used inside our coding. With this being heavily reliant on the server-side, MongoDB is the easiest to use and being open source, this is application can be used anywhere.

## Middleware

Middleware is the software used to bridge an operating system or database to an application on a network. With MongoDB being used as a server-side and the front/back-end framework needing to link together for our application to run. We used JavaScript, jQuery and Ajax languages to link client-side and server-side together.