

Semester Three Full Stack JavaScript Sprint One

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Project Description:

Many full-stack applications also require a Command Line Interface (CLI) to aid in configuration and system administration. This Full Stack JavaScript project is to build a simple CLI for a web application that needs to confirm new user accounts. The project will use node.js to create the web applications directory (or folder) structure and to add the configuration and text files for the new application. The CLI will provide commands to view and alter the configuration of the application and to create tokens to be used to confirm a new user.

Learning Outcomes:

1. Proven ability to build a Command Line Interface (CLI) using Node.
2. Proven ability to organize node.js code into modules and to deploy a small full stack project.
3. Proven ability to confirm and create a directory (folder) structure and organize files into the structure.
4. Proven ability to read and write json and text files using the node fs common core module(s).
5. Proven ability to alter and update attributes of a json configuration file.
6. Proven ability to generate a consistently unique token based upon the Cyclic Redundancy Check (CRC) to hash a value which is used to confirm every new user.
7. Proven ability to store new user authentications to a json file.
8. Proven ability to call the same token generation module from both the command line and a simple html page hosted by a node http server.
9. Proven ability to log all the application actions to an events log file saved to disk.

Project features as user stories:

Roles:

- **End users** are hands-on customers who work directly with various software products and tools to deliver on their personal or business goals.
- **Helpdesk employees** are the go-to people for providing technical assistance and support related to computer systems, hardware, and software. They are responsible for answering queries and addressing system and end user issues in a timely and professional manner.
- **System administrators** are responsible for managing, troubleshooting, licensing, and updating hardware and software assets.

Stories:

- As a system administrator I would like a command line interface (CLI) to initialize the application to build the required directory structure and add the default configuration and help files.
- As a system administrator I would like the CLI to provide a status for the initialization and configuration.
- As a system administrator I would like the CLI to provide a view of the current configuration file(s).
- As a system administrator I would like the CLI to provide the ability to update the configuration file with new values.
- As a system administrator I would like the CLI to provide the ability to reset the configuration file back to its original state.
- As a helpdesk employee I would like the CLI to provide the ability to generate a user token based on an end users username. This token would be the same as presented to the user via the end user self service web form.
- As a new end user I would like a web form that allows me to enter my username and after pressing submit receive a token I would use to confirm my new membership.
- (Note: this token should be sent to the new user via email or SMS. (At this time Keyin does not have either an outbound email or SMS server available for this development testing. We will stay with using the web form)

Project Deliverables:

A single zip file that contains the following;

1. All of the node.js files used to implement the project.
2. All other text or json files implemented by the project.
3. All dependent .json files that reference the project dependencies (ie. package.json)

Note: do not include the node_modules folder in the zip file.