Library Dependency

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Content Management System

Frontend

1. **Bootstrap**
   Bootstrap is the most popular HTML, CSS, and JS framework for developing responsive, mobile first projects on the web.
   Website: http://getbootstrap.com
   Version: 3.3.4

2. **Jquery**
   jQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers.
   Website: https://jquery.com/
   Version: 1.11.1

3. **D3 Graphical Library**
   D3.js is a JavaScript library for manipulating documents based on data. D3 helps you bring data to life using HTML, SVG and CSS. D3's emphasis on web standards gives you the full capabilities of modern browsers without tying yourself to a proprietary framework, combining powerful visualization components and a data-driven approach to DOM manipulation.
   Website: http://d3js.org/
   Version: 3.1

4. **Google analytics**
   Google analytics trace the page view for customers, by showing the volume of the website, vistors geographical distribution, pages opened, length of stay on each page and how they navigate through pages, to help web administrators to understand visitor behavior and improve the overall usability.
   Website: http://www.google.com/analytics/

Backend

1. **Keystone**
   The open source framework for developing database-driven websites, applications and APIs in Node.js. Built on Express and MongoDB.
   Website: http://keystonejs.com
   Version: 0.3.0

2. **connect-redis**
   connect-redis is middleware that handle Redis session store backed by node_redis.
   Website: https://github.com/tj/connect-redis
   Version: 2.2.0

3. **underscore**

Underscore is a JavaScript library that provides a whole mess of useful functional programming helpers without extending any built-in objects.
Website: http://underscorejs.org/
Version: 1.7.0

4. **express-handlebars**
Express-handlebars is a middleware design for express to render templates that written in handlebars.
Website: https://github.com/ericf/express-handlebars
Version: 1.1.0

5. **node-sass**
Node-sass is a library that provides binding for Node.js to libsass, the C version of the popular stylesheet preprocessor, Sass. It allows you to natively compile .scss files to css at incredible speed and automatically via a connect middleware.
Website: https://github.com/sass/node-sass
Version: 1.0.1

6. **moment**
Moment is a javascript library that parse, validate, manipulate, and display dates in JavaScript.
Website: http://momentjs.com/
Version: 2.8.1

7. **i18n**
Lightweight simple translation module with dynamic json storage.
Supports plain vanilla node.js apps and should work with any framework
Website: https://github.com/mashpie/i18n-node
Version: 0.5.0

8. **gulp**
Gulp is an javascript building system that utilize nodejs stream concept. It allows you to do minification, obfuscation of the source code and other tasks before development.
Website: http://gulpjs.com/
Version: 3.7.0

9. **Socket.io**
Socket.IO is a javascript library that enables real-time bidirectional event-based communication through websocket.
Website: http://socket.io/
Version: 1.3.5

Test System

- UNIT TESTING
  - Testing the inputs and outputs of methods as a black box, given the parameters within which they are expected to function
  - Tools:

- - Mocha.js – testing framework with test runner
    - Sinon.js – spies, mocks and stubs
    - Chai.js – assertion library
    - mockJSON – produce fake JSON documents
- INTERFACE TESTING
    - Checking whether interactions between the web server, other application servers and databases execute as expected
    - Tools:
        - Mocha.js – testing framework with test runner
        - Sinon.js – spies, mocks and stubs
        - Chai.js – assertion library
        - mockJSON – produce fake JSON documents
    -
- FUNCTIONALITY TESTING
    - Testing link and form functionality, database connection and session and local storage
        - Selenium Web Driver – cross-platform browser automation
        - Casper.js – navigation scripting and testing utility
- USABILITY TESTING
    - Ease of navigation, logical and well-styled content, and in-site search options
        - A/B testing – track Key Performance Indicators
        - Monitor participant interaction
        - Interview participants about interaction
- COMPATABILITY TESTING
    - Cross-browser, OS, mobile and printer-friendly options
        - Testem.js – run tests across multiple browsers
        - BrowserSync – automated browser updates and interaction syncing
- PERFORMANCE TESTING
    - Load testing, stress testing and variable connection speed testing
        - YSlow – performance-based webpage analyzer
        - JMeter – load/performance testing
        - Blocked.js – test if event loop is blocked
        - Look.js – performance profiler
- SECURITY TESTING
    - Cross-portal user permissions, URL pasting, protected file downloading, SSL testing, error/security logging