Fancy Four

Team 11

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A Web-based application
built using web technologies

Front-end Templating Engine
Allows for dynamic web pages.

Server-side JavaScript.
Implementing various packages to create a powerful web-based application.

Database for storing and accessing content.

handlebars

node JS®

MySQL®

Additional Features

Passport.js used for user login and local validation.

Password hashing using BCrypt through Node.js.

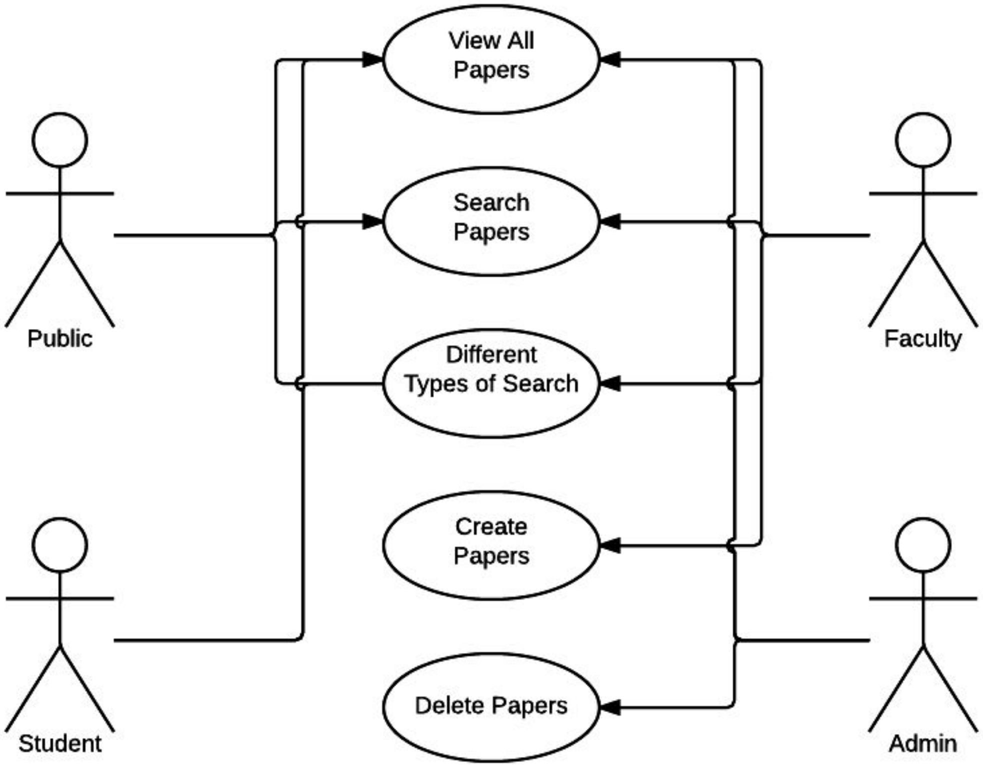
Connection pooling using Node.js.

Presentation Layer

CSS/Bootstrap
Handlebar Templates

Bootstrap template used for construction of the front end CSS and Javascript for user experience features.

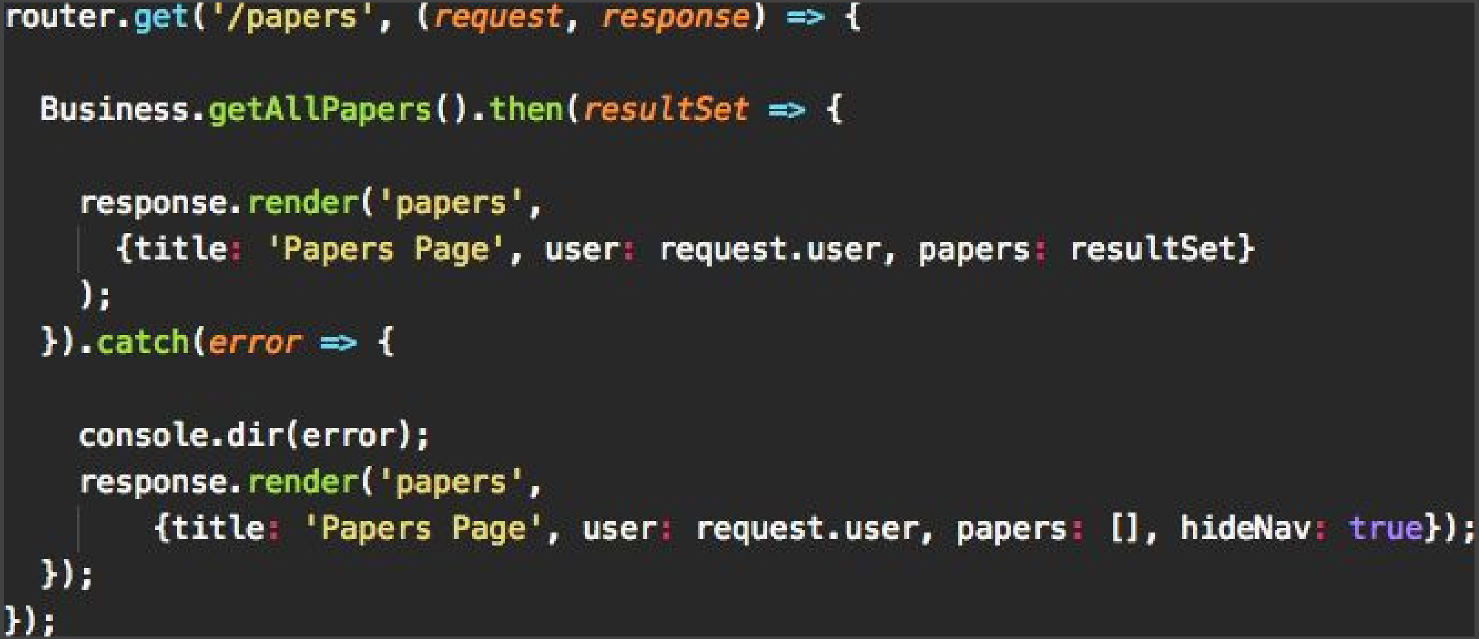
Handlebars templates used for insertion of data and construction of pages.



Different User Abilities

Presentation Layer

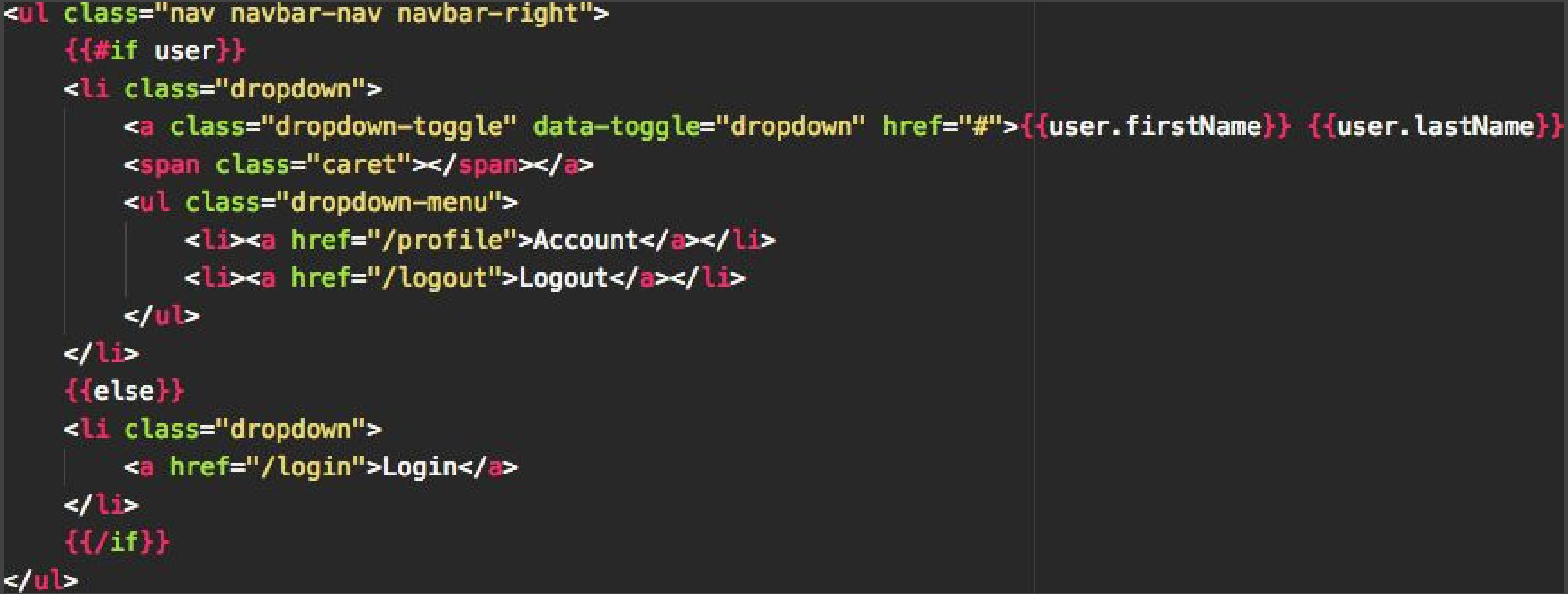
- Handlebars Templating allows for dynamic pages



```
router.get('/papers', (request, response) => {

  Business.getAllPapers().then(resultSet => {

    response.render('papers',
      {title: 'Papers Page', user: request.user, papers: resultSet}
    );
  }).catch(error => {

    console.dir(error);
    response.render('papers',
        {title: 'Papers Page', user: request.user, papers: [], hideNav: true});
  });
});
```

Presentation Layer

- Handlebars Templating allows for dynamic pages



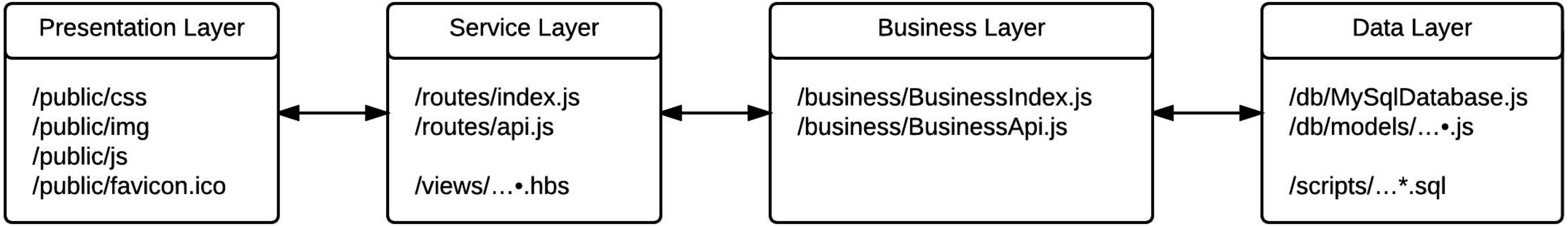
```
<ul class="nav navbar-nav navbar-right">
    {{#if user}}
    <li class="dropdown">
        <a class="dropdown-toggle" data-toggle="dropdown" href="#">{{user.firstName}} {{user.lastName}}
        <span class="caret"></span></a>
        <ul class="dropdown-menu">
            <li><a href="/profile">Account</a></li>
            <li><a href="/logout">Logout</a></li>
        </ul>
    </li>
    {{else}}
    <li class="dropdown">
        <a href="/login">Login</a>
    </li>
    {{/if}}
</ul>
```

Business Layer

BusinessAPI.js
BusinessIndex.js

Business Layer built in Javascript for calling methods from the Data Layer.

Also constructed for preparing formatting for Presentation Layer responsive design.



Presentation Layer

/public/css
/public/img
/public/js
/public/favicon.ico

Service Layer

/routes/index.js
/routes/api.js

/views/…•.hbs

Business Layer

/business/BusinessIndex.js
/business/BusinessApi.js

Data Layer

/db/MySqlDatabase.js
/db/models/…•.js

/scripts/…*.sql

Layer Interaction

Data Layer

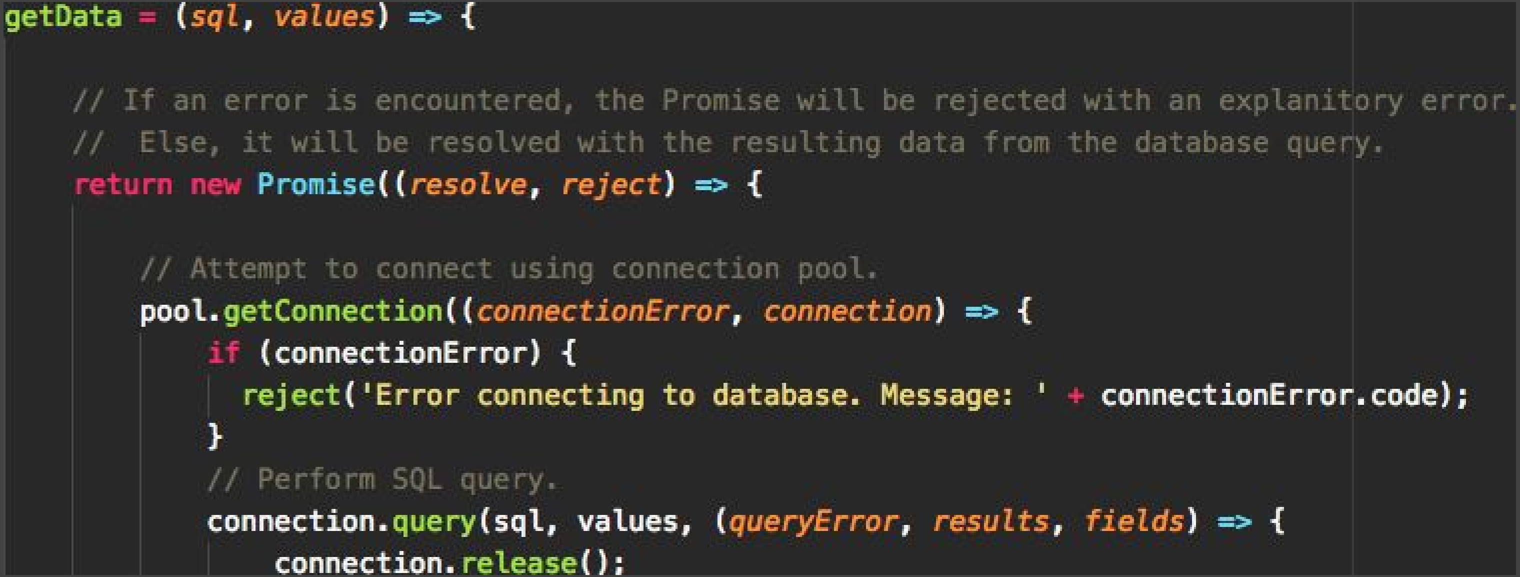
MySQL Node.js Module

MySQL Node.js module installed for interfacing with MySQL server.

Individual Javascript files constructed for each data layer object.

Data Layer

- Implemented Connection Pooling for more rapid database access.
- Prepared Statements for better security.



```
getData = (sql, values) => {

    // If an error is encountered, the Promise will be rejected with an explanitory error.
    //  Else, it will be resolved with the resulting data from the database query.
    return new Promise((resolve, reject) => {

        // Attempt to connect using connection pool.
        pool.getConnection((connectionError, connection) => {
            if (connectionError) {
              reject('Error connecting to database. Message: ' + connectionError.code);
            }
            // Perform SQL query.
            connection.query(sql, values, (queryError, results, fields) => {
                connection.release();
```

Demo

- sign up
- different user abilities
- modify

https://github.com/nrung/Fancy4