**Final Exam Review**

This is an outline for the final exam. Please review slides as well because all lecture material is fair game for the final exam.

\*\*If you have an ADS form and intend on using your accommodation, you must schedule your exam with the [testing center](https://www.towson.edu/accessibility-disability-services/testing.html). Due to scheduling conflicts, you will not be able to get accommodations if the exam is taken in the classroom at the regular time. Please schedule this a week in advance to avoid any issues.

1. **NodeMailer**
   1. Be able to send a simple email using NodeMailer
   2. Know the three main protocols and their functionality
2. **Cheerio**
   1. If given an HTML page, be able to parse it and return some result
3. **Package.json**
   1. The advantages of using it
4. **React**
   1. Advantages of using React
      1. Virtual DOM
   2. Differences between JSX and JavaScript
      1. Be able to write an interpret JSX code
   3. Be able to write and interpret actual React code
      1. Components
         1. Why components are important
      2. Props
      3. State
      4. Conditional Rendering
   4. React Native
      1. How good mobile hybrid solutions work vs bad ones
      2. The Message Queue
         1. Its importance and functionality
5. **Docker**
   1. Why is Docker useful when dealing with full-stack applications?
      1. Team collaboration
   2. Explain what a Docker Registry is
      1. Be able to list two
   3. Best version of Linux for simple Node.js app containerization
   4. Very basic commands of a Dockerfile
6. **GraphQL**
   1. How is GraphQL different than a RESTful API
      1. The advantages of using GraphQL
   2. How can GraphQL and a pre-existing RESTful API work together?
   3. Setting up a simple Schema given a scenario
      1. Schemas with relations
   4. Queries
      1. Be able to make Queries given a Schema
         1. Nested Queries for specific data as well
   5. Mutations and how they work
   6. Subscriptions and how they work
   7. Setup a simple GraphQL endpoint