

## Select Hosting Service

AWS EC2 Amazon Linux AMI 2018.03.0, t2.micro, with 1 vCPU and 1 GB memory.

## React Reading

- Tic Tac toe tutorial
  - Components take in parameters called props(properties) and returns a hierarchy of views to display via the render method
  - Render returns a react element
  - `<div />` is transformed at run time to `React.createElement('div')`
  - Use `onClick={() => aFunc }` to tell the program to run *aFunc* everytime a object is clicked
  - Components use 'state' to "remember" things
  - always call 'super' when defining the constructor of a subclass. All React component classes that have a constructor should start with a `super(props)` call.
  - To have a child alter the state of a parents object. Have the parent pass down a function for the child to use
  - Use `.slice()` to create a copy of an array to modify instead of modifying the existing array. This is better because it allows us to see past values for the array
  - When you call `setState` in a component, React automatically updates the child components inside of it too.
  - Unlike the array `push()` method you might be more familiar with, the `concat()` method doesn't mutate the original array, so we prefer it
  - need to specify a key property for each list item to differentiate each list item from its siblings

## Database Reading

- SQL tutorial on W3Schools
  - Stands for structured query language
  - Need a RDBMS database program to work
  - Table is a collection of related data entries and it consists of columns and rows
  - Table is broken up into smaller "fields"
    - A field is a column in a table that is designed to maintain specific information about every record in the table
  - A record, also called a row, is each individual entry that exists in a table
  - `SELECT * FROM Customers;` would select all of the records in the 'Customer' table
  - SQL keywords are not case sensitive
  - `SELECT` - extracts data from a database

- Data is returned in a result table called a result set
- Use 'select distinct' to get only records that are different
- Use select count (distinct <field>) to get the number of different records
- Use where is a filter. Ex. SELECT \* FROM Customers WHERE Country = 'Mexico';
  - Operations include <> for not equal; Between; Like; In; And; Or; Not
- UPDATE - updates data in a database
  - Make sure to use the 'where' clause or else all of the records will be updated
  - Ex. UPDATE Customers SET ContactName = 'Jason' WHERE CustomerID = 1;
- DELETE - deletes data from a database
  - Make sure to use the 'where' clause or else all of the records will be deleted
- INSERT INTO - inserts new data into a database
  -
- CREATE DATABASE - creates a new database
- ALTER DATABASE - modifies a database
- CREATE TABLE - creates a new table
- ALTER TABLE - modifies a table
- DROP TABLE - deletes a table
- CREATE INDEX - creates an index (search key)
- DROP INDEX - deletes an index
- MySQL supports LIMIT clause to select a limited number of records
- MIN()- returns the smallest value of the selected column
- MAX() returns the largest value of the selected column
- COUNT() number of rows that match the specified criterion
- EXIST operator is used to test for the existence of any record in a subquery, returns true or false

## CSS + Material UI Reading

- CareerFoundry Video "CSS Tutorial For Beginners"
  - Cascading Style Sheets- needs html
  - If working in html, you need to make a css file and tag it into your html file to see the difference
    - <link rel="<nameofstyle>" href="<CSSfilename>.css">
  - Selectors allow you to tell the browser what elements you want to apply the css code to
    - Element
    - Class- used to change multiple elements to the same css properties
      - .<nameofclass>{<properties>}

- ID- one off things you want to style
  - #<IDName>{<properties>}
- Grid
  - display: grid;
  - grid-template-rows: auto auto;
    - The auto means you just set the dimensions to whatever the default is, we type it twice, once for each row, (we have two rows in this example)
  - grid-template-columns: auto auto auto;
    - Same thing as above. Three columns. Can be replaced with percentages
- Mobile responsiveness
  - Use media query
    - @media(max-width: 600px){  
    .grid-table {  
        grid-template-columns:auto;  
        grid-template-rows: auto auto auto auto auto auto;  
    }  
}
    - In this example we want to change the grid to one column and 6 rows because on mobile devices we dont have as much space. We tell it to do it on mobile by setting max-width to 600px
- Max-width: <number>px
  - Sets the screen to the max number of px
- Margin: <number> auto
  - Will set the margin equal on both sides of the screen