The following is a summary report on the UofM Bootcamp class on the 12th of July 2018. This course was an introduction to the use of constructors in JavaScript coding. Constructors are ways to create objects, or modify existing objects based on a basic template object. Since JavaScript doesn't support classes, it utilizes constructors to bring similar functionality to that of object-oriented programming languages such as Java. Working with constructors is like the use of objects but provides its own set of coding challenges while providing new real-world use cases different from basic objects.

We started with reviewing objects by creating a new object named Cats and named Dogs to demonstrate how to call objects and how they all perform very similar. Then we demonstrated the power of constructors to help us create new objects based on the constructor. With our new understanding of how constructors are utilized in JavaScript, we coded an example RPG game which allows the user to create new characters based on the constructor, then we utilize several functions to have the new characters fight based on their defined stats. Finally , we took new code and created new constructors with defined functions in order to create a new digitalPal such as a dog and then have defined functions.

Challenges included how to debug our code as we worked to create it. Unlike HTML and CSS, which we can make small changes and see the result in the browser, back end JavaScript code run on node does not always produce an output as most of the code is functions and object which need to be called (additional code) to be run. Tools such as JSON.parse and stringify help modify the information in each object and print it to the console in a readable format.

A constructor is useful in many ways when utilized in JavaScript. A constructor allows for real code design by splitting the defining and creation of objects into separate js files. By doing this code can be blocked into smaller units which makes implementation and modification easier. Almost all backend code will want to use constructors. Similar in use to functions, a constructor in a separate js file can outline a predefined object which is then required and called from each application. For new or unique requirements, the new object can be modified/added to after it is created. This makes constructors useful in everything from game development to website real time content responsiveness.