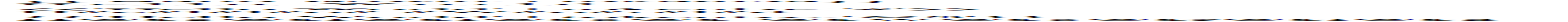
## BU MET College Assignment 06 CS701 A1 Rich Internet Apps

### Handed out: 03/04/2022 Due by 6 PM EST on Wednesday, 03/16/2022

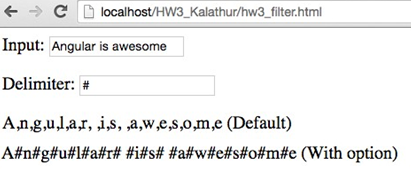
The objective of this assignment is to convince yourself that basic features of AngularJS work. Those features are described in Study Guide for Module 3 and AngularJS home site <https://docs.angularjs.org/>

**Part 1.** **(20%)** Part – AngularJS Filters

Using AngularJS, write the filter *tokenize* that can take an optional argument for the delimiter. By default, the filter produces a comma separated string of the individual characters of the given input. If the delimiter is provided, the individual characters in the input string are separated by the specified delimiter. For example,



Write the filter in an AngulajJS module. Now, use the filter to develop the Angular application. The controller provides the initial values for the two model properties, the input string and the delimiter string. Sample outputs are shown below.



**Problem 2.** **(20%)**

Install Node.js (& npm) and TypeScript. Create an empty project directory assign06 and initialize that project by running command npm -y. In the source director for your project add a TypeScript script that will declare a variable containing text “Hi There” and print that text to the console. Run tsc “compiler” and transpile that script into a JavaScript. Report on the content of both TypeScript and generated JavaScript files. Report on the content of your project.json file.

**Problem 3. (20%)**

Add a TypeScript file containing TypeScript equivalent of the following JavaScript code.

var person = {

firstName: "John",

lastName : "Doe",

fullName : function() {

return this.firstName + " " + this.lastName;

console.log( this.firstName + " " + this.lastName);

}

};

Place that file in the src directory of your project and transpile it using tsc compiler. Report the content of both ts and generated js file.

**Problem 4. (20%)**

Using TypeScript create a class and an object representing a car (motor vehicle). Let the object have attributes representing make, model and production year. Add a method, that displays concatenated values of vehicle’s model and year. Implement your object using Prototype pattern. Transpile your code into JavaScript and compare it with the code you wrote in JavaScript for Problem 1 of Problem set 1.

**Problem 5 (20%)**

Using TypeScript to create an Interface IVehicle which represents vehicles. Provide that interface with 2 attributes: year and make and one method, printYearMake(). Create a class Machine which has properties speed, type and isFloating. Let class Machine also have a method changeSpeed() which will increment speed by a specified amount . Create classes Car, Cart and Boat. Let each class implement interface IVehicle and extend class Machine. Let method changeSpeed() accept any speed increment for Car. Let it not allow objects of class Cart to exceed speed of 10 miles per hour. Let method changeSpeed() restrict the speed of any Boat to not more than 30 miles per hour. Use tsc compiler to traspile interfaces, and classes into JavaScript constructs. Demonstrate that objects of classes Car, Cart and Boat behave as expected. Report contents of your scripts in TypeScript and JavaScript and results of your demonstration.

**Submission:** Save your CS701\_HW6\_*FirstNameLastName* folder as a zip file, with an appropriate index.html and \*.js files, and upload the zip file to the Assignment section on the class Blackboard site.