**Experience IT - Mid-Term Project assignment**

Adam Woznicki

**Questions**

1.) What is bootstrap and why is it used? Can you build a website without bootstrap?

**Bootstrap is a web-development framework that allows a user to apply various styles of code. Bootstrap has different templates and layouts components that can be applied to an entire web page. You do not need bootstrap to build a website, it is one of many options that can be used.**

2.) Provide styling to an input box that give it a red border and a bold font to the text.



Write a jQuery to change the style of the input box with the same attribute as in Question 2.



Write a JavaScript that will read a value from an input box and show that in an alert.



3.) Explain the concept of inheritance (OOP) with an example.

**Inheritance is a concept where you create a base class with properties and methods that are passed down to any linked derived class. Example.) Derived classes Savings/Checking Account using Get Balance from the base class Account to find balance information.**

4.) How do you print the date in this format – Jan 01 2020 and 01/01/2020

var date = new Date("Jan 1 2020");

var date = new Date("01-01-2020");

5.) What is the difference between string and string builder?

**A string is a line of character that is immutable or cannot be changed. String builder is similar but it can be modified and often contains a sequence of variables.**

6.) How can I initial a variable *age=24,* in the constructor of a class *Student*? Provide a method in the class to change the value of *age*. Change the value of *age* in your program through an instance of the object.

class Student {

constructor(age) {

this.\_age = age;

this.\_behavior = 24;

}

get age() {

return this.\_age;

}

get behavior() {

return this.\_behavior;

incrementBehavior() {

this.\_behavior ++;

}

}

7.) Write the DDL statement to create the table and then an DML statement for inserting the above values. Use appropriate datatypes to design the INtable.

Id = 1

Name = ‘John’,

DOB = ‘1/1/1978’

Salary = 4000.89

Location = ‘MI’

CREATE TABLE

ExIT (

ID '1',

Name ‘John’,

DOB ‘1-1-1978’,

Salary '4000.9',

Location ‘MI’);

8.) Create an integer array of size 10

Create int arrayint[i] intArray = new int[10];

9.) Add 5 more elements after the array is initialized.

intArray[0] = 1;

intArray[1] = 2;

intArray[2] = 3;

intArray[2] = 3;

intArray[2] = 3;

10.) Print the 12th element of the array to the console

Console.Write(item.ToString(12));

11.) Write a simple program to Create a file, write “This is a test file” content in the file and save the file.

**1.) string** fileName = @"C:\Users\AdamWoznicki\Test.txt";

2.) Set-Content D:\temp\test\test.txt 'This is a test file'

3.) Stop-Transcript

12.) Write a SQL Statement to get all the employees in the Employee table whose date of birth is greater than Mar 12,1984.

SELECT \* FROM Employee WHERE dob > ‘3/12/84’

13.) What are models, views and controllers in MVC.

**Models exist to store data, in the form of a single object or a structure of objects. Views are the visual representation of the model knowledge. Views not only access data but can also filter it by simultaneously emphasizing and reducing the various components. Lastly, the controller is the link between the end user and the database. The controller outputs the view as an interactive, user-friendly interface that accepts human commands and manipulations and appropriately translates them back to the view.**

14.) What is routing in MVC and what is a default route?

**A default route maps a URL to three parameters; controller name, controller action, and ID. In principle, routing translates any incoming browser data to a specific MVC controller and its associated actions. The default route is automatically set with standard properties although routes can be customized depending on a program’s content.**

15.) What is the difference between Code First and Database First Migration ?

**First Migration lets a developer design from the ground up compared to Database First, which begins with an existing dataset. Both methods result in a similar output, but there are key differences. Code First requires more programming knowledge as code is written from the start compared to Database First and its reliance on autogenerated scripts. Because of this, Code First can be easier to manipulate, especially if classes are used to define objects in place of design tools. Both approaches are commonly used (along with Model First, similar to Database) and have utility depending on the project and the user's personal preference.**