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**Each question below is worth 2 points. Write answers clearly in the space provided.**

1. Explain the difference between Client-Side and Server-Side programming.

Client-Side scripts reside on the user’s PC. Server-Side scripts reside on the server. Client-Side programs are executed quickly, and there is no database connection. Server-Side gives multiple users simultaneous access, and has a database connection.

1. Which type is applicable to the programs you write in this class?

Client-Side programming is applicable to the programs we write in class.

1. What common programming tool is not necessary to create and run a JavaScript program?

Compiler is not necessary to create and run a JavaScript program.

1. Name 4 major differences between Java and JavaScript

4 major differences between Java and JavaScript are Java’s code is powerful but complex, and JavaScript code is easy to learn and to use. Java requires a special app (JDK), where JavaScript no additional software is needed. Java programs must be saved and compiled separately, and JavaScript Code can be added directly anywhere in the HTML text editor. Lastly, Java is used for complex tasks, and JavaScript is used for quick, simple tasks.

1. Describe the advantage of using JavaScript instead of HTML alone.

The advantage of using JavaScript is it allows you to create pages where content and layout can be modified using special code built into the page. Combining both allows you to create dynamic, working website while maintaining professional appearance.

1. What is the purpose of the <SCRIPT> element?

The purpose of the <script> element is it is required at the start and end of every JavaScript code.

1. Explain why a text editor and a browser are the only pieces of software you need to create a JavaScript program.

The text editor is where the code is written and the browser runs the code and the outcome is presented.

1. How are data types determined in JavaScript? Why?

Data types are determined in JavaScript by the values you enter. This is because the variable data type is either Numeric, String, Boolean, or Null.

1. Explain how to display output on the screen using JavaScript.

To display output on the screen using JavaScript, you must use the document.write command.

1. What is a variable? Provide 3 benefits of using variables in computer programming.

A variable is a name given to a piece of data/information. 3 benefits of using variables are easier to remember, quickly accessible, and it saves time.

1. Explain if/why the following code would result in an error:

**Var** AcctBalance = OriginalBalance + Deposits –Withdrawals;

This would result in a Load-Time error because Var shouldn’t be capitalized. It should be var. This is a syntax mistake, so it is a Load-Time error. JavaScript will stop the code when this is found.

1. Name the 4 variable types supported by JavaScript and describe each.

Four variable types supported by JavaScript are Numeric, String, Boolean, and Null. Numeric is any number in standard or scientific notation. String contains any group of alphanumeric characters. Boolean variables indicate whether the statement/condition is TRUE or FALSE. And null has no assigned value. It serves as a placeholder for future data.

1. Variable “HouseNumber” has been created to hold the user’s current bank account balance represented by dollars and cents. This is an example of a Numeric variable.
2. Variable “PhoneNumber” has been created to hold the user’s telephone number. This is an example of a String variable.
3. Variable UserAge will be set to TRUE if the user is 18 or over and FALSE if not. This is an example of a Boolean variable.
4. Variable Total holds no data at all right now. This is an example of a Null variable.
5. What is a function?

A function is a series of commands that can be executed by your program to calculate a value or perform an action.

1. Name the three main parts of a function.

Three main parts of a function are the name, parameters, and commands.

1. Name 3 benefits of using functions.

3 benefits of using functions are complex programming tasks can be broken down into simpler steps, code does not have to be duplicated within a program, and code can be reused multiple times by placing a simple function cell.

1. What is a function parameter?

The function parameters are values needed by the function to produce the expected result.

1. What is the purpose of the function call?

The purpose of the function call is to run the function that you previously wrote.

1. What is the purpose of the function return statement?

The purpose of the function return statement is functions can send results back to the function call statement if these results are needed by the program for additional processing. This action can be accomplished using the return command along with the variable that is being passed back.

1. Describe 3 benefits of using external files in computer programming.

3 benefits of using external files are easy access to the code from all files, eliminates the need to replicate commonly used code in every page of the website, and keeping this code separate keeps things organized and allows for easier debugging.

1. What file extension must be given to these types of files?

.js is the file extension that must be given to external files.

1. What is the purpose of commenting code?

The purpose of commenting code is it provides descriptions about the purpose and meaning of the code that has been commented. Comments are helpful when you want to revisit programs after a long period of time, and they are ignored by the browser.

1. Name two types of code comments covered in the class.

Two types of code comments are Single-Line and Multi-Line.

1. What is meant by debugging code?

Debugging Code is identifying and correcting errors in code. In order to effectively correct the code you should first identify the type of error that you are dealing with.

1. Name 3 JavaScript debugging tools/techniques.

3 JavaScript debugging tools/techniques are flowcharting, modular code, and displaying each value on the screen every step of the program to track processing of the variables each step of the way.

1. Name and describe 3 **types** of common JavaScript coding errors.

3 types of common JavaScript coding errors are Load-Time (Syntax Error), Run-Time (Mislabeling variable names), and Logical (Program executes as expected but results differ from what is expected).

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**Each question below is worth 4 points. Write answers clearly in the space provided.**

1. Analyze the code sample below. What is it going to do?

<script type="text/javascript">

document.write(“Hello, welcome to my first JavaScript program”);

</script>

This code is going to write the output: “Hello, welcome to my first JavaScript program.”

1. Analyze the code sample below. What is it? What is it going to do?

//User input goes here

This is a single-line comment. This is ignored by the browser, but will help you while coding.

1. Analyze the code sample below. What is it going to do?

<script type="text/javascript">

var DayOfWeek=”Monday“;

document.write(“Today is “ + DayOfWeek);

</script>

This code will produce the output: “Today is Monday”.

1. Analyze the code sample below. What is it? What is it going to do?

var Answer=FunctionCalc(500, 200);

This is a variable declaration. Answer is equal to FunctionCalc. The parameters are 500 and 200.

1. Analyze the code sample below. What is it going to do?

var FinalBalance, OriginalBal=5000, Deposits=2000, Withdrawals;

document.write(“Your original balance is “ + OriginalBal);

This code will write “Your original balance is 5000”.

1. Analyze the code sample below. What is it? What is it going to do?

function Calculate(CurrYr, BirthYr)

{

var Age = CurrYr – BirthYr;

return Age;

}

var DataOutput=Calculate(2011, 1950);

document.write(DataOutput);

This code is a function. It is going to declare a function called Calculate, with parameters CurrYr and BirthYr. Then it declares a variable called Age , and the value of Age is CurrYr – BirthYr. It then returns the output to var DataOutput. Variable DataOutput is equal to Calculate and the parameters get assigned 2011 and 1950. Lastly, the code writes the value of DataOutput.

1. Analyze the code sample below. What is it? What is it going to do?

/\*

function DoTheMath(Number1, Number2)

will use 2 parameters Number1 and Number2

to compute the total.

\*/

This is a Multi-Line comment. The browser ignores the comment. It will help you when typing the code.

1. Analyze the code sample below. Running this code will result in a Load-Time error. Why? Because there is a colon instead of a semi-colon at the end of line 2. This is a syntax mistake.

var FinalBalance, OriginalBal=5000, Deposits=2000, Withdrawals=1000;

FinalBalance=OriginalBal+Deposits-Withdrawals:

document.write(“Your final balance is “ + FinalBalance);

1. Analyze the code sample below. Running this code will result in a Logical Error. Why? Because FinalBalance is equal to OriginalBal +Deposits+Withdrawls. This doesn’t make sense because every time you deposit money, you withdrawal money. The program will still run, but results will differ from what is expected.

var FinalBalance, OriginalBal=5000, Deposits=2000, Withdrawals=1000;

FinalBalance=OriginalBal+Deposits+Withdrawals;

document.write(“Your final balance is “ + FinalBalance);

1. Analyze the code sample below. Running this code will result in a Run-Time Error. Why? Because there is unclear variable declaration.

var FinalBalance, OriginalBal=5000, Deposits=2000, Withdrawals=1000;

FinalBalance=OriginlBal+Deposits-Withdrawals;

document.write(“Your final balance is “ + FinalBalance);

YOU HAVE REACHED THE END OF THE TEST