JavaScript Tutorial 10 Notes:

* The script element – used to embed program code or to reference code stored in an external document.
  + <**Script** type=”text/javascript”>
* The type attribute – defines the scripting language used in the program.
  + <Script **type**=”text/**javascript**”>
* The var keyword – used to declare a **variable**, which is a named item in a program that stores a value or object.
* The document.write() method – used to write text strings into a Web document. The text written byt the document.write() method can include Web page text or HTML code.
  + **document.write**(“<a href=**’mailto:cadler@mpl.gov’**>”);
  + **document.write**(“[**cadler@mpl.gov**](mailto:cadler@mpl.gov)”);
  + **document.write**(“</**a**”);
  + [cadler@mpl.gov](mailto:cadler@mpl.gov) – HTML code written into the Web page using JavaScript
* Spam – junk e-mail that advertise products and services not requested by recipient.
  + Spammer – a person who sends these unsolicited e-mails, sometimes in bulk e-mailings involving tens of thousands of recipients.
* E-mail Harvester – program that scans documents, usually Web pages, looking for e-mail addresses. E-mail addresses found within the code of a document is added to a database, which can then be used for sending spam.
* Server-Side Programming – program is placed on the server that hosts a Web site. The program is then used to modify the contents and structure of Web pages.
  + **Advantages** - program running on a server can be connected to a database containing information not usually accessible to end users, enabling them to perform tasks not available on their own computers. This enables Web pages to support such features asonline banking, credit card transactions, and discussion groups.
  + **Disadvantages** – server-side programs use Web server resources, and in some cases a server’s system administrator might place limitations on access to server-side programs to prevent users from continually accessing the server and potentially overloading the system. If the system is overloaded, an end user might have to sit through long delays as the server-side program handles multiple requests for information and action.
    - User retrieves Web page from the server.
    - Information is sent to a program running on the server.
    - A server-side program processes the information and may send additional feedback to the user.
* Client-Side Programming – solves many of these problems by running programs on the user’s own computer rather than remotely off the server. Computing is distributed so that the server is not overloaded with program-related requests.
  + **Advantages** – Client-side programs also tend to be more responsive because users do not have to wait for data to be sent over the Internet to a Web server.
  + **Disadvantages** – Client-side programs can never completely replace server-side programming. For example, tasks such as running a search or processing a purchase order must be run from a central server because only the serve contains the database needed to complete these types of 0perations.
    - User retrieves Web page from the server.
    - User runs the program locally receiving instant feedback.
* In many cases, a **combination of server-side and client-side programming** is used. For example, Web forms typically use client-side programs to validate a user’s entries-such as ensuring that all address information has been completely entered-and use server-side programs to submit the validated form for further processing-such as sending a purchase order to a central database.
  + - User retrieves Web page.
    - User runs a program locally.
    - Information is sent from the program to the server.
    - A server-side program processes the data from the client-side program.
* Compiled Language -