

ANNOUNCEMENTS

- ❖ You must implement programming projects by yourself.

SCOPE OF VARIABLES

- ❖ Variables declared in a function are called local variables.
- ❖ They are created on entry to the function and destroy on exit.
- ❖ You can use the same name in different functions as they are different variables.
- ❖ Variables declared outside of a function are called global variables.

GENERATION OF RANDOM VALUES

- ❖ Example: RandomValues.html

FORMS

- ❖ **Forms** - means by which information passes from the user to a server.
- ❖ For now we will use forms to read values to be processed by our JavaScript programs.
- ❖ **<form> tag**
 - ❖ Defines the form.
 - ❖ It has two attributes: action and method
 - ❖ **action** – indicates where the form contents will be sent when the form is submitted.
 - ❖ **method** – defines how the contents will be sent (post/get).
- ❖ **<input>tag**
 - ❖ Appears inside of the <form> tag.
 - ❖ Defines several input data alternatives.
 - ❖ The general format is: **<input type="ALTERNATIVE" />**
 - ❖ **ALTERNATIVE** can be text, password, checkbox, radio, file, submit, image, button, reset, hidden
- ❖ We have can several forms in our document.
- ❖ **Example:** Forms.html

EVENTS

- ❖ **Event** – Notification that something has occurred.
- ❖ Example of situations that make the web browser generate an event
 - ❖ Browser finishes loading a document.
 - ❖ When the user clicks on a button.
 - ❖ When the user moves the mouse.
 - ❖ Others
- ❖ **Event handler** (also known as event listener)
 - ❖ JavaScript function or code fragment that is executed when a particular event occurs.
- ❖ **Event handler registration**
 - ❖ Associating an event handler with a particular event.
- ❖ **Example:** EventEx.html

EVENT-DRIVEN PROGRAMMING

- ❖ **Normal (control flow-based) programming**
 - ❖ Approach
 - ❖ Start at main()
 - ❖ Continue until end of program or exit()
- ❖ **Event-driven programming**
 - ❖ Start at main()
 - ❖ Register event handlers.
 - ❖ Await events & perform associated computation.
- ❖ **GUIs (Graphical User Interfaces)**
 - ❖ Example of event-driven software.

EVENT HANDLER ATTRIBUTES FOR MOST HTML

❖ Mouse Related

- ❖ **onclick** – mouse button is pressed and released.
- ❖ **ondblclick** – mouse button is double-click over element.
- ❖ **onmouseover** – mouse moves over element.
- ❖ **onmouseout** – mouse moves off element.
- ❖ **onmousemove** – mouse pointer is moved.
- ❖ **onmousedown** – mouse is pressed down while cursor is over the element.
- ❖ **onmouseup** – mouse is released while the cursor is over the element.

❖ Keyboard Related

- ❖ **onkeypress** – key pressed and released.
- ❖ **onkeydown** – key is pressed.
- ❖ **onkeyup** – key is released.

❖ Other

- ❖ Keep in mind that there are additional handlers that are specific to certain tags. We will address those later on.