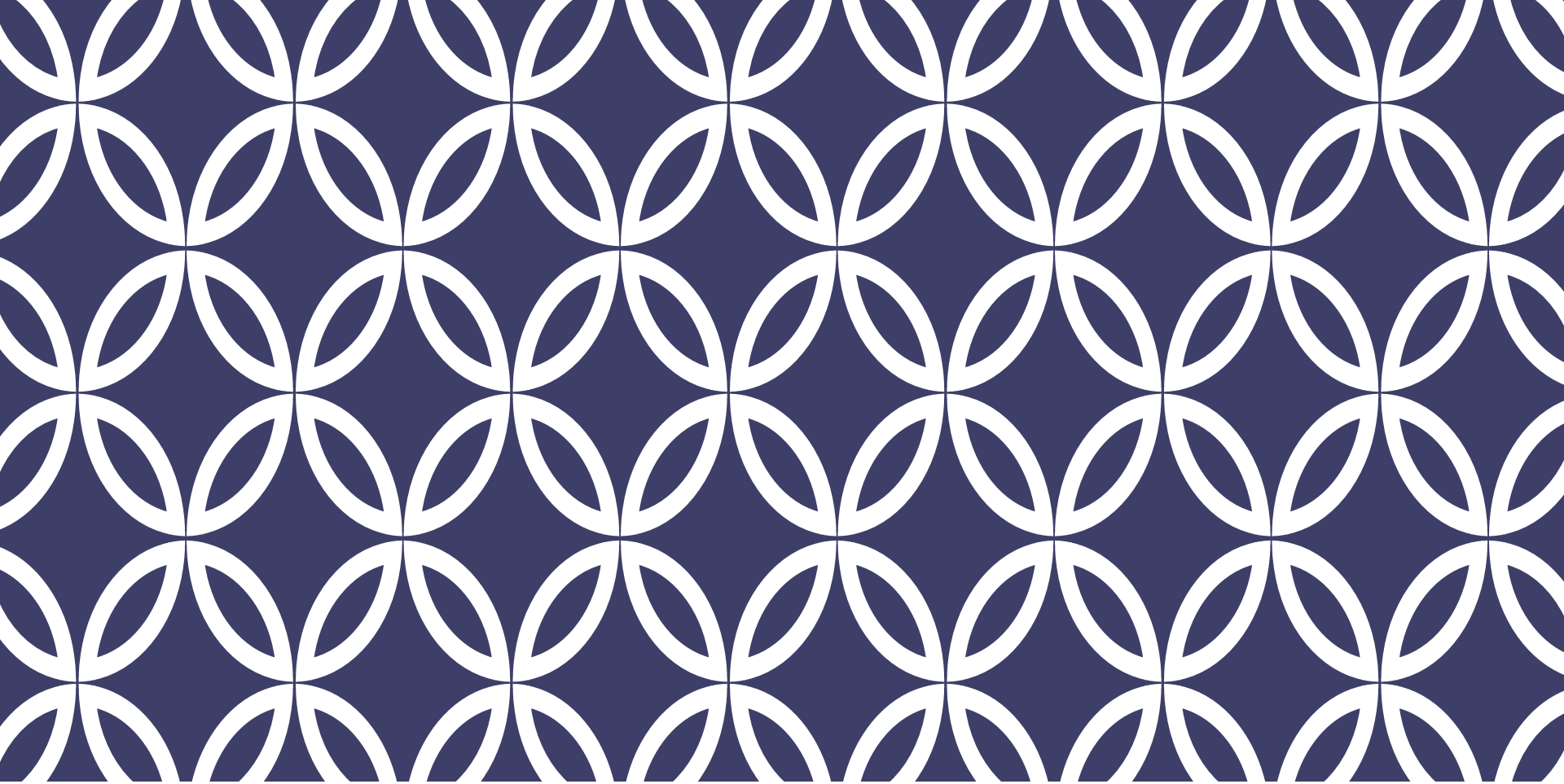
ACADGILD

Presents

Front End Web Development Basics



Session 5 – JavaScript

Agenda – JavaScript

1. What is JavaScript
2. Why Learn JavaScript
3. First JavaScript Program
4. Variable
5. Data Types
6. Example of Data Types
7. Operators
8. Where To Place JavaScript
9. Function basic

What is JavaScript

- **JavaScript** is a full-fledged programming language that can be applied to an HTML document and used to create **dynamic interactivity on websites**.
- It was invented by **Brendan Eich**, co-founder of the Mozilla project, the Mozilla Foundation and the Mozilla Corporation.

Why learn JavaScript

- JavaScript is one of the **3 languages** all web developers **must** learn:
  - **HTML** to define the structure/content of web pages
  - **CSS** to specify the layout/design of web pages
  - **JavaScript** to program the behavior of web pages

- It's free and easy to set up.
- It's easy to debug
- Powerful and execution speed is fast
- Widely used
- In Demand and Thriving User Community

First JavaScript Program

- JavaScript is written in html file inside a script tag.
- alert is a function to display popup message to user.
- The plus (+) operator is used to concatenate strings.

```
<html>
    <head>
        <script type = text/javscript”>
            Var  name = “Smith”;
            Var  age  = 29;
            alert(“The name is “+name  + ”And age  is “+age);
        </script>
    </head>
    <body>  </body>
</html>
```

Variable

- **Variables** are containers that you can store values in.
- Declaring a variable with the var keyword, followed by any name you want to call it:

  Syntax : var variableName;

- **Rule :** They must begin with a letter or the underscore character.
- **JavaScript** is an **untyped programming language**.
- Semicolons in JavaScript terminates a statement.

Data Types

- JavaScript allows the same variable to contain different types of data values.
- **Primitive data types**
  - **Number:** integer & floating-point numbers
  - **Boolean:** logical values “true” or “false”
  - **String:** a sequence of alphanumeric characters
- **Composite data types (or Complex data types)**
  - **Object:** a named collection of data
  - **Array:** a sequence of values
- **Special data types**
  - **Null:** an initial value is assigned
  - **Undefined:** the variable has been created by not yet assigned a value

Example of Data Types

Variable Data Types	Explanation	Example
String	A string of text. To signify that the variable is a string, you should enclose it in quote marks.	var myVariable = 'Bob';
Number	A number. Numbers don't have quotes around them.	var myVariable = 10;
Boolean	A True/False value. true/false are special keywords in JS, and don't need quotes.	var myVariable = true;
Array	A structure that allows you to store multiple values in one single reference.	var myVariable = [1,'Bob','Steve',10]; Call each member of the array like this: myVariable[0],myVariable[1], etc.
Object	Everything in JavaScript is an object, and can be stored in a variable.	var myVariable = document.querySelector('h1'); Note : All of the above examples too.

Operators

An operator is basically a mathematical symbol that can act on two values (or variables) and produce a result.

- Arithmetic operators + , - , / , * , %
- Logical operators && , || , !
- Comparison operators == , === , >= , <=
- String operators +
- Bit-wise operators & , ! , >> , <<
- Assignment operators += , -= , /= , *=

Where To place JavaScript

- Scripts can be placed in 3 places in Web page
  - In the <head> section of an HTML page
    - <head>
      <script>
      alert(“Hello”);
      </script>
      </head>
  - In the <body> section of an HTML page
    - <body>
      <script>
      alert(“Hello”);
      </script>
      </body>
  - Import as an external file
    - <script src=“Path_to_JavaScript_File"></script>

Function Basic

- A JavaScript function is a block of code designed to perform a particular task.
- A JavaScript function is executed when "something" invokes it (calls it).

```
function name(parameter1, parameter2, parameter3) {
        code to be executed
}
```

Lets Discuss Assignments