Prepared By:

Sajid Ali

MCS, M.Sc (Math), B.Ed

3 PROGRAMING FUNDAMENTALS

Topic: JAVASCRIPT

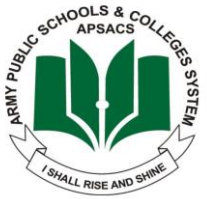
JAVASCRIPT

SLOs:

At the end of the lesson Students will be able to:

- Describe Javascript
- Write Event-Driven Program in Javascript
- Explain Variables, Operators, and Conditional Statement

JAVASCRIPT



"**JavaScript** is a high-level, text-based programming language used to make webpages **interactive and dynamic**."

JavaScript is the language of the web

"It lets you do things like show alerts, change text, react to button clicks, and much more—without reloading the page."

JAVASCRIPT

What JavaScript Can Do:

- Display or update content on a webpage
- Respond to user actions (like clicks or typing)
- Validate forms before submitting
- Create animations or effects
- Build full applications (e.g., games, online forms, tools)

JAVASCRIPT

```
1.  <html>
2.   <body>
3.    <script language="javascript" type="text/javascript">
4.      document.write ("Let's Meet Javascript!")
5.  //    document.write ("     Let's Meet Javascript     !      ")
6.    </script>
7.   </body>
8.  </html>
```

Output

Fig-20: A simple JavaScript Text is displayed.

JAVASCRIPT

Display “Let’s Meet JavaScript” using Function:

```
<p id="Text"></p>
 <script>
    document.write("Hello! Welcome to Kamboh KIDS Fashion")
 </script>
```

Important Notes:

- document.write() only works while the page is loading
- It's mostly used for simple demos or teaching purposes
- **Not recommended** for real-world web development. Instead, use:
  - document.getElementById()

JAVASCRIPT

Display Alert Message:

```
<script type="text/javascript">
    function msgSure() {
        alert("Are You Sure??")
    }
 </script>

<p>Do You Mind, Clicking on the Botton -</p>
<input type="button" onclick="msgSure()" value="Be Sure"/>
```

Write in Head Section

JAVASCRIPT

Variables:

"A **variable** in JavaScript is a container used to **store data values** — such as numbers, text (strings), or other data."

"Think of a variable as a **labeled box** where you can put something (like a number or name) and use it later."

JAVASCRIPT

A variable is declared with the 'var' keyword and multiple variables can be declared in the same line of code, too. The first ever assignment of a value to a variable in the life span of program is called 'initialization'. A good programming practice is to declare and initialize the variable at the same time.

Example:

```
let name = "Ali";
let age = 16;
```

JAVASCRIPT

Why Use Variables:

- To **store values** that you want to use again
- To **perform calculations** or operations
- To **make code reusable** and easier to understand

Types of Data You Can Store:	
• Numbers: let age = 20;	• Strings: let name = "Sara";
• Arrays: let fruits = ["apple", "banana"];	• Objects: let student = {name: "Ali", age: 15};
• Boolean (true/false): let passed = true;	

JAVASCRIPT

```
1.  <html>
2.  <body>
3.     <script type="text/javascript">
4.           var a,b,reward;
5.           reward = 5555;
6.           a = reward % 10;
7.           b = reward / 10;
8.           document.write(a, " ---- ",b);
9.     </script>
10. </body>
11. </html>
```

Output

Fig-24: Multiple variables.

JAVASCRIPT

Operators:

"**Operators** are symbols or words in JavaScript that perform operations on values or variables — like math, comparisons, logic, or assigning values."

Javascript supports arithmetic operators to be used which are Addition (+), Subtraction (-), Multiplication (*) and Division (/). Other than this, the Modulus (%) operator can also be used which gives remainder of a division operation.

JAVASCRIPT

```
1.  <html>
2.  <body>
3.    <script type="text/javascript">
4.          var a,b,reward;
5.          reward = 5555;
6.          a = reward % 10;
7.          b = reward / 10;
8.          document.write('Value of variable a is:',a);
9.          document.write("<br />")
10.         document.write('Value of variable b is:',b);
11.   </script>
12. </body>
13. </html>
```

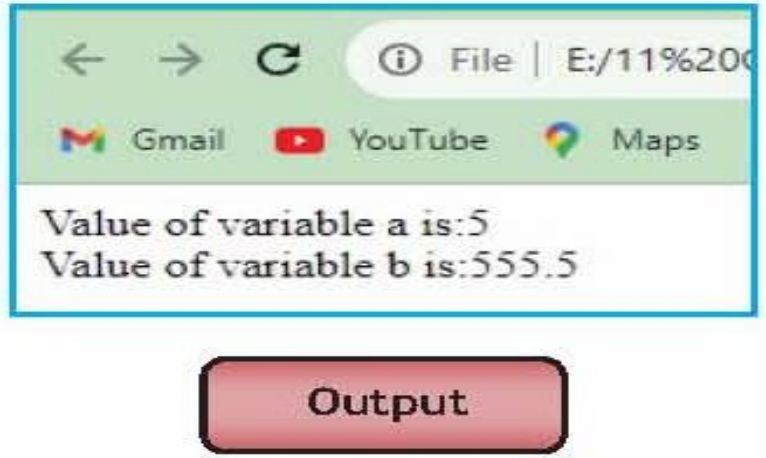


Fig-25: Handling and Printing multiple variables.

JAVASCRIPT

Conditional Statement:

"A **conditional statement** in JavaScript is used to **make decisions in your code**. It lets the program choose between **different actions** based on whether a condition is **true or false**."

Operator	Name	Example
==	Is equal	x == y
!=	Is not equal	x != y
>	Greater than	x > y
<	Less than	x < y
>=	Greater than or equal to	x >= y
<=	Less than or equal to	x <= y

Table:3.3: JavaScript Conditional Operators

JAVASCRIPT

```
1.  <html>
2.   <body>
3.    <script type="text/javascript">
4.          var kid_age = 5;
5.          if( kid_age > 3 )
6.          {
7.             document.write("<b> Admission Granted !!! </b>");
8.          }
9.    </script>
10.  </body>
11. </html>
```

Output

Fig-26: 'if' statement.

JAVASCRIPT

ACTIVITY

Verbal Questions:

Q. What is JavaScript?

Q. What is variable?

Q. What is conditional statement and why we use it?

AFL STRATEGIES

Class Discussion,

Brainstorming,

Feedback and Reflection

ASSIGNMENT

“Write down the code given in Fig-28 on Textbook page No 113 in your computer notebooks.”

HOME WORK

Reading Text Book Page Number 107- 113


THANK
YOU