Prepared By:

Sajid Ali

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

3 PROGRAMING FUNDAMENTALS

Topics:

- FUNCTIONS
- DEBUG THE CODE
- DYNAMIC WEBSITE

PROGRAMMING FUNDAMENTALS

SLOs:

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

- Explain The Function
- Define Debugging
- Describe Dynamic Website

PROGRAMMING FUNDAMENTALS

3.4.8 Functions

Function is a set of line which occurs in the code quite often that can be segmented once, and called again and again. This way, rewriting the same set of code for similar results can be eliminated. Through functions, different sets of code can be separated resulting in fewer lines of code assigning them meaningful names based on their functionality. This leads to efficiently managing a large computer program. Programming languages provide built-in such functions like earlier we have used functions prompt(), input(), etc. Whenever the function is called, the caller does not necessarily need to know the code behind that function, to use it.

PROGRAMMING FUNDAMENTALS

```
1.  <html>
2.    <head>
3.      <script type="text/javascript">
4.              function msgSure(currency, amount) {
5.                      alert("Are You Sure, you gave me "+currency+"."+amount,"???")
6.              }
7.      </script>
8.    </head>
9.    <body>
10.             Do You Mind, CLICKING on the Button -
11.             <input type="button" onclick="msgSure('Rupees', 5000)" value="Be Sure" />
12.   </body>
13. </html>
```

Output

Fig-36: A function with arguments

PROGRAMMING FUNDAMENTALS

Debug The Code:

"In **Programming Fundamentals**, **debugging** is the process of **finding and fixing errors (bugs)** in a program."

Note:
Textbook Page No 119 **"Debug The Code"** Explain how debugging takes place by Visual Studio IDE.

Key Points about Debugging:

Bug: A mistake or flaw in the code that causes the program to behave unexpectedly or incorrectly.

Debugging: The activity of identifying, isolating, and correcting these bugs.

PROGRAMMING FUNDAMENTALS

3.6 Create a Dynamic Website

If a school wants to display the result of each student on their website, then they have to create a different static webpage for each student. And as the students increase, so does the handling and managing of these webpages. The solution is to provide dynamic website such that contents change according to the user input. Such dynamic website can be created via JavaScript along with Html and CSS.

PROGRAMMING FUNDAMENTALS

```
1.  <html>
2.    <body>
3.      <script type="text/javascript">
4.              var index;
5.              document.write("For-Loop Starts After This ... <br />");
6.              for(index = 0; index < 10; index=index+1){
7.                      document.write("Index No. : ", index, "<br />");
8.              }
9.              document.write("For-Loop Stopped!");
10.             function descOrder () {
11.                     for(index = 10; index > 0; index=index -1){
12.                             document.write("Index No. : ", index, "<br />");
13.             }
14.             }
15.     </script>
16.     <p id="dynamicContent">Click the button to change output to Descending Order.</p>
17.     <button onclick="descOrder()">Descending Order</button>
18.   </body>
19. </html>
```

Fig-40 (a): Code to create dynamic websit

PROGRAMMING FUNDAMENTALS

ACTIVITY

Verbal Questions:

Q. What is Function?

Q. What is Debugging?

Q. What is difference between static website and dynamic website?

AFL STRATEGIES

Class Discussion,

Brainstorming,

Feedback and Reflection

ASSIGNMENT

“Write down the code of Project - 2 in your computer notebooks.”

Project - 2

Create a webpage about you and your hobbies (like stamp collecting, pets, etc.)

The webpage initially should highlight about your family background, your personal achievements and activities. Later, provide details about your every hobby for creating awareness and motivation for others.

You may add some related links for others who want to start and opt for the same hobbies.

HOME WORK

Reading Text Book Page Number 117- 120

THANK
YOU