



Module Presenter's Manual

for

Programming with JavaScript

***Effective From: December 2021
Ver. 1.0***

Amendment Record

Version No.	Effective Date	Change	Replaced Pages
1.0	December 2021	New	-

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1. Introduction

Objectives:

- Explain classes and modules
- Perform pattern matching in JavaScript
- Group scripts and write non-blocking scripts
- Perform data access
- Preprocess JavaScript files
- Implement JavaScript minification
- Explain Web workers
- Use JavaScript Tools such as Firebug, Chrome Developer tools, Internet Explorer Developer Tools and so on
- Use Responsive APIs

2. Information on Session Allocation

Module	Online Hours	Self-Study Hours
Programming with JavaScript	24	10










3. Module Deliverables

To aid the learning process, following are the deliverables

(Faculties can access eBooks and other components in Onlinevarsity through Aptrack.)

Student Deliverables:

Resources available on Onlinevarsity:

Icons	Feature - Description / Functionality
	Download Book - Student has the option to download the subject related e-book and read offline.
	Glossary - Student can access a list of subject related specialized words with their definitions.
	FAQ - Student can access frequently asked questions and their answers.
	Show Me How - Student can view a step-wise simulation/demonstration of the module related topics.
	Practice 4 Me - Student can test and evaluate their understanding of module related topics.
	Work Assignments - Student can solve scenario based lab assignments (Hands-on). The faculty will evaluate and give their feedbacks.
	References - Student can access additional subject related material for reading.
	Feedback - Student can provide feedback on the course material.
	Ask to Learn – Student can submit subject related technical queries. Queries submitted will be directed to the particular course coordinator/head.

4. Week-wise Session Schedule

- A session is of 2 hours duration

➤ Week-Wise Schedule

Week	Day 1		Day 2		Day 3	
1	Session 1 JS – TL1		Session 2 JS – TL2		Session 3 JS – TL3	S1
2	Session 4 JS – TL4		Session 5 JS – TL5	S2	Session 6 JS – TL6	
3	Session 7 JS – TL7	S3	Session 8 JS – TL8		Session 9 JS – TL9	S4
4	Session 10 JS – TL10		Session 11 JS – TL11		Session 12 JS – TL12	S5

JS: Programming with JavaScript

TL: Online Session

S: Self Study Hours (over and above the module duration)

5. Session Coverage

Session No.	Session Title	Session Details	Deliverables' Mapping
1	JS – TL1	<p>All the topics as listed below from Session 1 of <i>Programming with JavaScript</i> book should be covered in this session.</p> <p><u>Session 1: Introduction to JavaScript</u></p> <ul style="list-style-type: none"> ➤ Define JavaScript ➤ Differentiate between JavaScript and Java ➤ Describe Web Applications and Websites ➤ Compare and contrast between server-side and client-side scripting ➤ Explain basic concepts of JavaScript <p><u>Session 2: Matching Patterns in JavaScript</u></p> <ul style="list-style-type: none"> ➤ Explain Regular Expression (RegExp) in JavaScript and its uses ➤ Identify RegExp object and matching patterns in JavaScript ➤ Describe the uses of modifiers, brackets, and metacharacters ➤ Describe properties and methods of RegExp in JavaScript 	<p><u>Programming with JavaScript</u></p> <p>SG - Session 1 & 2 XP - Session 1 & 2 TG - Session 1 & 2</p>
2	JS – TL2	<p>The workshop lessons of Session 1 and Session 2 of <i>Programming with JavaScript</i> course should be covered in this session.</p>	<p><u>Programming with JavaScript (OnlineVarsity)</u></p> <p>Session 1 & 2</p>
3	JS – TL3	<p>All the topics as listed below from Session 3 of <i>Programming with JavaScript</i> book should be covered in this session.</p> <p><u>Session 3: Preprocessing JavaScript Files</u></p> <ul style="list-style-type: none"> ➤ Describe what a preprocessor is ➤ Explain supported preprocessors in detail ➤ Explain how preprocessing happens in JavaScript 	<p><u>Programming with JavaScript</u></p> <p>SG - Session 3 XP - Session 3 TG - Session 3</p>
	S1	<p>The assignments of Session 1 to Session 3 of <i>Programming with JavaScript</i> course should be covered in this session.</p>	<p><u>Programming with JavaScript (OnlineVarsity)</u></p> <p>Session 1 to 3</p>

Session No.	Session Title	Session Details	Deliverables' Mapping
4	JS – TL4	<p>All the topics as listed below from Session 4 of <i>Programming with JavaScript</i> book should be covered in this session.</p> <p><u>Session 4: Grouping Scripts and Non-Blocking Scripts</u></p> <ul style="list-style-type: none"> ➤ Explain the concept of grouping scripts through inline and external JavaScript files ➤ Define blocking and non-blocking JavaScript operations ➤ Differentiate between blocking and non-blocking operations in JavaScript 	<p><u>Programming with JavaScript</u></p> <p>SG - Session 4 XP - Session 4 TG - Session 4</p>
5	JS – TL5	<p>The workshop lessons of Session 3 and Session 4 of <i>Programming with JavaScript</i> course should be covered in this session.</p>	<p><u>Programming with JavaScript (OnlineVarsity)</u></p> <p>Session 3 & 4</p>
	S2	<p>The assignments of Session 4 of <i>Programming with JavaScript</i> course should be covered in this session.</p>	<p><u>Programming with JavaScript (OnlineVarsity)</u></p> <p>Session 4</p>
6	JS – TL6	<p>All the topics as listed below from Session 5 of <i>Programming with JavaScript</i> book should be covered in this session.</p> <p><u>Session 5: Interacting with HTML Objects Using JavaScript</u></p> <ul style="list-style-type: none"> ➤ Describe data access in brief ➤ Describe how JavaScript events work with HTML objects ➤ Describe how HTML Document Object Model (DOM) elements work on JavaScript ➤ Explain how JavaScript is added in HTML DOM ➤ Define JSON and its uses 	<p><u>Programming with JavaScript</u></p> <p>SG - Session 5 XP - Session 5 TG - Session 5</p>
7	JS – TL7	<p>All the topics as listed below from Session 6 of <i>Programming with JavaScript</i> book should be covered in this session.</p> <p><u>Session 6: JavaScript Minification</u></p> <ul style="list-style-type: none"> ➤ Explain what JavaScript minification is ➤ Explain how JavaScript minification process works ➤ List the benefits of JavaScript minification 	<p><u>Programming with JavaScript</u></p> <p>SG – Session 6 XP - Session 6 TG – Session 6</p>

Session No.	Session Title	Session Details	Deliverables' Mapping
		<ul style="list-style-type: none"> ➤ Explain the online tools available for JavaScript minification process ➤ Explain in detail how Google Closure Compiler tool for JavaScript minification works 	
	S3	The assignments of Session 5 and Session 6 of <i>Programming with JavaScript</i> course should be covered in this session.	<u>Programming with JavaScript</u> (OnlineVarsity) Session 5 & 6
8	JS – TL8	All the topics as listed below from Session 7 of <i>Programming with JavaScript</i> book should be covered in this session. <u>Session 7: Web Workers</u> <ul style="list-style-type: none"> ➤ Define Web workers ➤ Differentiate between the two types of Web workers: dedicated and shared ➤ Explain how to create a Web worker file and object ➤ Explain how a Web worker object is terminated and reused 	<u>Programming with JavaScript</u> SG – Session 7 XP – Session 7 TG – Session 7
9	JS – TL9	The workshop lessons of Session 5 to Session 7 of <i>Programming with JavaScript</i> course should be covered in this session.	<u>Programming with JavaScript</u> (OnlineVarsity) Session 5 to 7
	S4	The assignments of Session 7 of <i>Programming with JavaScript</i> course should be covered in this session.	<u>Programming with JavaScript</u> (OnlineVarsity) Session 7
10	JS – TL10	All the topics as listed below from Session 8 of <i>Programming with JavaScript</i> book should be covered in this session. <u>Session 8: JavaScript Developer Tools</u> <ul style="list-style-type: none"> ➤ Describe what are developer tools ➤ Explain the use of various browser developer tools with JavaScript 	<u>Programming with JavaScript</u> SG – Session 8 XP – Session 8 TG – Session 8

Session No.	Session Title	Session Details	Deliverables' Mapping
11	JS – TL11	<p>All the topics as listed below from Session 9 of <i>Programming with JavaScript</i> book should be covered in this session.</p> <p><u>Session 9: Using Responsive APIs in JavaScript</u></p> <ul style="list-style-type: none"> ➤ Define Responsive API ➤ Describe how an API works ➤ Explain the uses of APIs in JavaScript ➤ Describe how to use responsive APIs 	<p><u>Programming with JavaScript</u></p> <p>SG – Session 9 XP – Session 9 TG – Session 9</p>
12	JS – TL12	The workshop lessons of Session 8 and Session 9 of <i>Programming with JavaScript</i> course should be covered in this session.	<p><u>Programming with JavaScript (OnlineVarsity)</u></p> <p>Session 8 & 9</p>
	S5	The assignments of Session 8 and Session 9 of <i>Programming with JavaScript</i> course should be covered in this session.	<p><u>Programming with JavaScript (OnlineVarsity)</u></p> <p>Session 8 & 9</p>

6. Library References

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| ➤ Head First JavaScript Programming by Elisabeth Freeman and Eric Freeman |
| ➤ Effective JavaScript: 68 Specific Ways to Harness the Power of JavaScript by David Herman |
| ➤ Beginning JavaScript , 5ed by Jeremy McPeak |

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