



JSPM's  
**JAYAWANTRAO SAWANT POLYTECHNIC,**  
Handewadi Road, Hadapsar, Pune-28  
Department of Information Technology  
Academic Year 2025-26



## Practical Plan

Practical No :- 1

Class: TY

Name of Subject & Code: CSS(314005)

Name of Faculty: Ms.P.R.Wale

<b>Name of Experiment</b>	* Write a program to display " Hello World " using: • Console.log() • document.write( ) • alert ()
<b>Prerequisite</b>	<b>Basic HTML, JS</b>
<b>Equipment's to be used</b>	<b>PC, Browser</b>
<b>Procedure (Key points)</b>	<b>Create HTML, add JS methods</b>
<b>In between check points during experimentation</b>	<b>Check console, alert popup</b>
<b>Safety measurements</b>	<b>Avoid infinite alerts</b>
<b>Analysis of result</b>	<b>Compare methods</b>
<b>Question To be asked</b>	<b>Difference between console.log &amp; document.write?</b>

Subject Teacher

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Academic Year 2025-26

### **Practical Plan**

Practical No :2

**Class:** TY

**Name of Subject & Code:** CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	Write a program to display "Welcome " using Python script
<b>Prerequisite</b>	Python basics
<b>Equipment's to be used</b>	Python interpreter
<b>Procedure (Key points)</b>	Create script, print message
<b>In between check points during experimentation</b>	Script runs?
<b>Safety measurements</b>	Use correct syntax
<b>Analysis of result</b>	Program outputs message
<b>Question To be asked</b>	How print() works?

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**Practical Plan**

Practical No :- 3

**Class: TY**

**Name of Subject & Code:** CSS(314005)

Name of Faculty: Ms.P.R.Wale .

<b>Name of Experiment</b>	Create objects for the given problem with JSON
<b>Prerequisite</b>	Basic understanding of the related technology
<b>Equipment's to be used</b>	Laptop/PC, Required Software
<b>Procedure (Key points)</b>	Follow standard procedure steps for the experiment topic
<b>In between check points during experimentation</b>	Verify intermediate outputs/behaviors
<b>Safety measurements</b>	Avoid syntax errors and follow safe coding practices
<b>Analysis of result</b>	Evaluate correctness of output
<b>Question To be asked</b>	Explain core concept behind the experiment

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### **Practical Plan**

Practical No :- 4

**Class: TY**

**Name of Subject & Code:** CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	1. Setup Angular development environment using. • Installation of Node.js and npm • Installation of Angular CLI  2. Write a program to display "Good Morning " Message on web page
<b>Prerequisite</b>	Angular basics
<b>Equipment's to be used</b>	Angular CLI
<b>Procedure (Key points)</b>	Create component → edit HTML → interpolate message
<b>In between check points during experimentation</b>	Check build without errors
<b>Safety measurements</b>	Follow Angular folder structure
<b>Analysis of result</b>	Message displayed
<b>Question To be asked</b>	

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### **Practical Plan**

Practical No : 5

**Class: TY**

**Name of Subject & Code:** CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	Write AngularJS program to design form using various controls and apply validations on input
<b>Prerequisite</b>	HTML forms
<b>Equipment's to be used</b>	AngularJS library
<b>Procedure (Key points)</b>	Create form → add ng-model → add validations
<b>In between check points during experimentation</b>	Check real-time validation
<b>Safety measurements</b>	Avoid invalid model names
<b>Analysis of result</b>	Errors highlighted properly
<b>Question To be asked</b>	List AngularJS validation directives

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## Practical Plan

Practical No :6

Class: TY

Name of Subject & Code: CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	Write a program to display data model view and display data for given problem
<b>Prerequisite</b>	Basic understanding of AngularJS basics
<b>Equipment's to be used</b>	Browser
<b>Procedure (Key points)</b>	Bind model using ng-model → display via {{ }}
<b>In between check points during experimentation</b>	Check two-way binding
<b>Safety measurements</b>	Ensure AngularJS loaded
<b>Analysis of result</b>	Model updates live
<b>Question To be asked</b>	What is \$scope?

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Practical No :- 7

**Class: TY**

**Name of Subject & Code:** CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	Write a program to display two - way data binding
<b>Prerequisite</b>	Basic Understanding of Data binding concept
<b>Equipment's to be used</b>	AngularJS
<b>Procedure (Key points)</b>	Use ng-model → update model → reflect in UI
<b>In between check points during experimentation</b>	Check instant update
<b>Safety measurements</b>	Avoid binding to undefined variables
<b>Analysis of result</b>	Binding functional
<b>Question To be asked</b>	One-way vs two-way binding?

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## Practical Plan

Practical No :8

**Class:** TY

**Name of Subject & Code:** CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	Write a program to implement different filters in AngularJS
<b>Prerequisite</b>	Basic understanding of AngularJS basics
<b>Equipment's to be used</b>	Browser
<b>Procedure (Key points)</b>	Apply uppercase, lowercase, currency filters
<b>In between check points during experimentation</b>	Check formatting
<b>Safety measurements</b>	Use correct pipe syntax
<b>Analysis of result</b>	Data transforms correctly
<b>Question To be asked</b>	What is custom filter?

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## Practical Plan

Practical No : 9

Class: TY

Name of Subject & Code: CSS(314005)

Name of Faculty: Ms.P.R.Wale. .

<b>Name of Experiment</b>	Write a program to implement different events in Angular JS
<b>Prerequisite</b>	Basic understanding of Event basics
<b>Equipment's to be used</b>	Browser, AngularJS
<b>Procedure (Key points)</b>	Use ng-click, ng-change, ng-submit
<b>In between check points during experimentation</b>	Check event triggers
<b>Safety measurements</b>	Avoid inline JS
<b>Analysis of result</b>	Events trigger correctly
<b>Question To be asked</b>	Name AngularJS event directives

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**Practical Plan**

Practical No : 10

**Class: TY**

**Name of Subject & Code:** CSS(314005)

Name of Faculty:Ms.P.R.Wale.

<b>Name of Experiment</b>	Write a program displaying data in a table
<b>Prerequisite</b>	Loops in AngularJS
<b>Equipment's to be used</b>	Browser
<b>Procedure (Key points)</b>	Use ng-repeat to create table rows
<b>In between check points during experimentation</b>	Check row count
<b>Safety measurements</b>	Avoid wrong repeat syntax
<b>Analysis of result</b>	Table loads correctly
<b>Question To be asked</b>	What is ng-repeat?

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### Practical Plan

Practical No : 11

Class: TY

Name of Subject & Code: CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	Write a program to implement CSS to table data-odd and even rows
<b>Prerequisite</b>	CSS selectors
<b>Equipment's to be used</b>	Browser
<b>Procedure (Key points)</b>	Use tr:nth-child(even/odd)
<b>In between check points during experimentation</b>	Check alternating colors
<b>Safety measurements</b>	Choose accessible color contrast
<b>Analysis of result</b>	Rows visually alternate
<b>Question To be asked</b>	Difference between pseudo-classes & classes?

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### Practical Plan

Practical No :- 12

Class: TY

Name of Subject & Code: CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	Write programs for implementation of different methods of AngularJS Controllers
<b>Prerequisite</b>	Basic understanding of JS functions
<b>Equipment's to be used</b>	Browser
<b>Procedure (Key points)</b>	Create controller → add multiple functions → bind to UI
<b>In between check points during experimentation</b>	Check function outputs
<b>Safety measurements</b>	Keep controller light
<b>Analysis of result</b>	Functions run correctly
<b>Question To be asked</b>	What is dependency injection?

Subject Teacher

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## Practical Plan

Practical No : 13

**Class:** TY

**Name of Subject & Code:** CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	Write programs to demonstrate use of controllers in external files
<b>Prerequisite</b>	JS modules
<b>Equipment's to be used</b>	Editor
<b>Procedure (Key points)</b>	Create external JS file → link → reference controller
<b>In between check points during experimentation</b>	Check path correctness
<b>Safety measurements</b>	Avoid global scope pollution
<b>Analysis of result</b>	Controller loads
<b>Question To be asked</b>	Why use external controllers?

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### **Practical Plan**

Practical No :-14

**Class:** TY

**Name of Subject & Code:**CSS(316005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	Write a program to handle data using React form
<b>Prerequisite</b>	Basic understanding of React basics
<b>Equipment's to be used</b>	Node, Browser
<b>Procedure (Key points)</b>	Use props/state → display in component
<b>In between check points during experimentation</b>	Check component rendering
<b>Safety measurements</b>	Avoid mutating state directly
<b>Analysis of result</b>	Data displayed correctly
<b>Question To be asked</b>	Difference between props & state?

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### Practical Plan

Practical No : 15

Class: TY

Name of Subject & Code: CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	Write a program to pass function argument into React component
<b>Prerequisite</b>	Basic understanding of React props
<b>Equipment's to be used</b>	Browser
<b>Procedure (Key points)</b>	Pass callback → trigger via event
<b>In between check points during experimentation</b>	Check argument passing
<b>Safety measurements</b>	Bind functions properly
<b>Analysis of result</b>	Parent-child communication works
<b>Question To be asked</b>	Explain lifting state up

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### **Practical Plan**

Practical No : 16

**Class: TY**

**Name of Subject & Code:** CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	Write a program to pass function argument into React program and implemnt the life cycle of React
<b>Prerequisite</b>	Basic understanding of React hooks
<b>Equipment's to be used</b>	Browser
<b>Procedure (Key points)</b>	import useState → update state → re-render
<b>In between check points during experimentation</b>	Check UI update
<b>Safety measurements</b>	Initialize state properly
<b>Analysis of result</b>	State changes reflect
<b>Question To be asked</b>	Why are hooks used?

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### Practical Plan

Practical No :17

Class: TY

Name of Subject & Code: CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	Write a program to implement states of React Hooks
<b>Prerequisite</b>	Basic understanding of React hooks
<b>Equipment's to be used</b>	Browser
<b>Procedure (Key points)</b>	import useState → update state → re-render
<b>In between check points during experimentation</b>	Check UI update
<b>Safety measurements</b>	Initialize state properly
<b>Analysis of result</b>	State changes reflect
<b>Question To be asked</b>	Why are hooks used?

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### Practical Plan

Practical No :18

Class: TY

Name of Subject & Code: CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	Write a program to design real time form using react components
<b>Prerequisite</b>	Basics of React forms
<b>Equipment's to be used</b>	Browser
<b>Procedure (Key points)</b>	Controlled components → update on change
<b>In between check points during experimentation</b>	Check instant updates
<b>Safety measurements</b>	Avoid uncontrolled inputs
<b>Analysis of result</b>	Form responds live
<b>Question To be asked</b>	Difference between controlled & uncontrolled components?

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### **Practical Plan**

Practical No : 19

**Class:** TY

**Name of Subject & Code:** CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	Write a program to apply validations for React form
<b>Prerequisite</b>	Basic understanding of React state
<b>Equipment's to be used</b>	Browser
<b>Procedure (Key points)</b>	Add validation logic → show messages
<b>In between check points during experimentation</b>	Check validation before submit
<b>Safety measurements</b>	Sanitize user input
<b>Analysis of result</b>	Errors show correctly
<b>Question To be asked</b>	Name different validation types

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**Practical Plan**

Practical No: 20

**Class:** TY

**Name of Subject & Code:** CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	Write a program to manipulate List using key and without key in React
<b>Prerequisite</b>	Basic understanding of React rendering
<b>Equipment's to be used</b>	Browser
<b>Procedure (Key points)</b>	Render list → modify → compare with/without key
<b>In between check points during experimentation</b>	Check console warnings
<b>Safety measurements</b>	Keys must be unique
<b>Analysis of result</b>	Re-render behavior
<b>Question To be asked</b>	Why are keys important?

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### **Practical Plan**

Practical No : 21

**Class: TY**

**Name of Subject & Code:** CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	Write a program to render a list using map function in React
<b>Prerequisite</b>	Basic understanding of Array methods
<b>Equipment's to be used</b>	Browser
<b>Procedure (Key points)</b>	Use map() → return JSX items
<b>In between check points during experimentation</b>	Check loop output
<b>Safety measurements</b>	Do not use index as key
<b>Analysis of result</b>	List displays
<b>Question To be asked</b>	Why avoid index as key?

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**Practical Plan**



Practical No :22

**Class: TY**

**Name of Subject & Code:** CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	Write a program to apply following approaches of css to a React web page  Inline styling  CSS stylesheetsCSS Modules
<b>Prerequisite</b>	Basics of Arduino, digital pins, IDE installation
<b>Equipment's to be used</b>	Arduino, LED, 220Ω resistor, jumper wires, USB cable
<b>Procedure (Key points)</b>	Connect LED to pin 13. Write digitalWrite HIGH/LOW with delay(). Upload code.
<b>In between check points during experimentation</b>	Correct COM port, LED polarity, resistor in series.
<b>Safety measurements</b>	Avoid short circuits; do not power board from multiple sources.
<b>Analysis of result</b>	LED should blink at programmed intervals.
<b>Question To be asked</b>	What is purpose of delay()? What is digitalWrite?



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### Practical Plan

Practical No : 23

Class: TY

Name of Subject & Code: CSS(314005)

Name of Faculty: Ms.P.R.Wale.

<b>Name of Experiment</b>	The microproject has to be web based real time application suggested by teacher such as : <ul style="list-style-type: none"><li>• Develop a web "Chat Application" having Chat window with send and receive the text,image etc.</li><li>• Develop a web "Music Player application" where user can get the Album with signer and play the music.</li></ul>
<b>Prerequisite</b>	Basic understanding of React advanced
<b>Equipment's to be used</b>	Node, React
<b>Procedure (Key points)</b>	Create components → manage state → UI → functionality
<b>In between check points during experimentation</b>	Test message sending or music playing
<b>Safety measurements</b>	Validate user input, avoid large files
<b>Analysis of result</b>	App works as intended
<b>Question To be asked</b>	Which architecture was used?

Subject Teacher

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