Tools used.

a) HTML5 mainly for the structure and semantic layout of web pages.

b) CSS3 for styling pages, layouts responsiveness, and navigation bars.

c) JavaScript (Vanilla): For interactivity, DOM manipulation, theme toggling, and form validation.

d) VS Code: As the code editor.

e) W3C Validators: For checking and validating HTML and CSS code.

f) GitHub pages: For hosting and live demo.

Key features implemented

a) Multi page website: Home, About, Projects, Contact and Survey pages.

b) Responsive design: Website layout adapts to mobile and desktop screen sizes.

c) Navigation bar: Horizontal menu across all pages for easy navigation.

d) Dark and light theme toggle: Switchable using a button with JavaScript.

e) Greeting Message: Displayed on homepage load based on time of day.

f) Forms: Contact and survey forms with input validation using JavaScript and regex.

Challenges faced and solutions

1. Form Validation: Challenge: Ensuring correct email and phone number format.
   Solution: Used regular expressions in JavaScript to validate email and 10-digit phone numbers.

2. Theme Toggle: Challenge: Making the site toggle between dark and light modes.

Solution: put a JavaScript function to toggle a dark mode CSS class on the <body> element.

3. Multi-column layouts: Challenge: Structuring About and Projects pages with 2-column and 3-column layouts. Solution: Used CSS Flexbox/Grid and media queries for responsive columns.

4. Dynamic project details: Challenge: Users should be able to expand or collapse project descriptions. Solution: Used event listeners in JavaScript to show/hide content on button click.