Steps for Hosting:

To begin hosting the website, the first step is to choose a hosting provider that supports PHP and MySQL, such as InfinityFree. After selecting the provider, the website files, including HTML, CSS, JavaScript, and PHP files, are uploaded to the server using either the File Manager .Once the files are uploaded, the next task is to set up a MySQL database using the phpMyAdmin interface provided by the hosting provider. The necessary tables must be created to store feedback data such as the name, comments, and a timestamp.

The PHP script is then configured to connect to the MySQL database using the appropriate server credentials, including the hostname, username, password, and database name. The form in the HTML file is updated to point to the PHP script, ensuring that form submissions are processed correctly and data is inserted into the database. Once all files are uploaded and the connection is established, the website is tested by submitting feedback to verify that data is properly received and stored in the MySQL database. After hosting the website, regular monitoring is required to ensure everything functions smoothly.

Details of Dynamic Features:

One of the main dynamic features of the portfolio website is the feedback system, where visitors can provide their input about the website. The form allows users to enter their name and comments. When the form is submitted, the data is captured and processed by a PHP script (comment.php). The form inputs are sent to the server, and the PHP script connects to the MySQL database using prepared statements to insert the feedback data into the appropriate table.

The feedback data (name and comments) is stored in the MySQL database via phpMyAdmin. This makes it easy to retrieve and display the feedback at a later time. The success message is displayed to the user once the data is successfully submitted, indicating that the feedback has been recorded. This feature enhances user engagement by allowing visitors to actively contribute their thoughts on the portfolio.

Deployment Challenges & Solutions:

During the deployment process, one of the main challenges was establishing a connection between the PHP script and the MySQL database. Initially, there were some connection issues, but after verifying the MySQL credentials and using the correct server information, the connection was successfully established.

Another challenge was ensuring the security of user-submitted data and preventing SQL injection. To address this, prepared statements were used to safely bind user inputs to the SQL query, ensuring that malicious code could not be executed. Here’s how the PHP code looks for inserting the feedback data:

```
$stmt = $conn->prepare("INSERT INTO feedback (name, comments) VALUES (?, ?)");
$stmt->bind_param("ss", $name, $comments);
$stmt->execute();
```

Lighthouse Score Summary:

After implementing the improvements, the Lighthouse score for the website showed significant progress, with scores increasing up to 90%. This reflects better performance, accessibility, best practices, and SEO.

In terms of performance, the website now loads faster, thanks to optimizations like lazy-loaded images and minified CSS/JS files. The accessibility score improved with the addition of the lang="en" attribute to the <html> tag, making the website more accessible for screen readers. The ARIA labels were also added to icon-only links, improving navigation for users with disabilities.