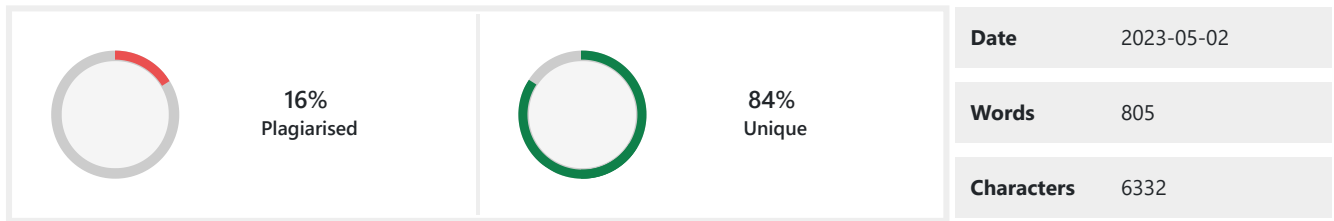


PLAGIARISM SCAN REPORT



Content Checked For Plagiarism

Phase 2: Predicted rating generation using weighted average

The second phase is the implementation of the predicted rating calculation to find which charging station is to be recommended. The system calculates the weighted average using the method as mentioned in section 4.2.4 of this document.

$$W = \frac{(\sum_{i=1}^n [w_i X_i])}{(\sum_{i=1}^n w_i)}$$

Here, w_i is the weight value, X_i is the item value and W is the weight obtained after the computation. For this system, the weight is the similarity score between the charging stations. The item value is the rating provided to the charging station by the user. So, if we consider $P(c,u)$ as the predicted rating of charging station c for user u , $S_{(c,c_i)}$ as the similarity score between the charging station c and c_i , and $R_{(u,c_i)}$ as the rating provided by user u to charging station c_i then we can rewrite the formula as:

$$P(c,u) = \frac{(\sum_{i=1}^n [S_{(c,c_i)} \cdot R_{(u,c_i)}])}{(\sum_{i=1}^n S_{(c,c_i)})}$$

Testing

Testing is the process of finding errors and bugs in the system.

Testing is the act of examining the elements and the behaviour of the software under test by validation and verification.

Testing is performed parallelly to coding. If any bugs or errors are found during the testing phase, it is fixed via editing the code or re-coding.

Validation ensures that the software satisfies the user requirements. **It is carried out at the end of the SDLC.**

If the software matches requirements for which it was made, it is validated.

Verification ensures that the system is developed adhering to the proper specifications and methodologies. If the software matches the development criteria it is verified.

This system was subject to various scenarios and the outcome was noted. The system was tested using test cases which have been documented as:

Table 5.2: Test case for signup

Test Case ID TC-1

Test Scenario Register new user

Actions Open Register page

Input the name, email, and password.

Click "Register" button.

Input Name: Ram Dhami

Email: ramdhami@gmail.com

Password: 23morang@33

Confirm password: 23morang@33

Expected Results Redirected to recommendations page.

Name displayed on top right of screen.
Observed Results As expected
Assertion Pass

Table 5.3: Test case for login
Test Case ID TC-2

Test Scenario Login existing user
Actions Open Login page
Input the email and password.
Click "Login" button.
Input Email: ramdhami@gmail.com
Password: 23morang@33
Expected Results Redirected to recommendations page.
Name displayed on top right of screen.
Observed Results As expected
Assertion Pass

Table 5.4: Test case for addition of rating with valid data
Test Case ID TC-3

Test Scenario Addition of rating using valid data.
Actions Open rate page.
Input the location, the charging station, and rating.
Press "Add Rating" button.
Input Province: Bagmati
District: Kathmandu
Metropolitan: Kathmandu
Ward: 22
Charging Station: Jagat Charging Station
Rating: 4
Expected Results Success message is displayed.
"ratings" table is updated.
Observed Results As expected
Assertion Pass

Table 5.5: Test case for addition of charging station with valid data
Test Case ID TC-4

Test Scenario Addition of charging station with valid data.
Actions Open Add Charging Station page.
Input the locations and the charging station details.
Press "Add Charging Station"
Input Name: Shiva Shakti Charging Station
Province: Bagmati
District: Kathmandu
Metropolitan: Kathmandu
Ward: 30
Fast Charging AC Ports: 2
Fast Charging DC Ports: 3
Regular AC Ports: 4

Regular DC Ports: 4
Nearest Restaurant: 312
Nearest Shopping Mall: 569
Nearest Cinema Hall: 452
Expected Results Success message is displayed
Database table "charging_stations" has a new entry.
Redirect to index page.
Observed Results As expected
Assertion Pass

Table 5.6: Test case for addition of charging station with invalid data
Test Case ID TC-5

Test Scenario Addition of charging station using invalid data.
Actions Open Add Charging Station page.
Input the locations and the charging station details.
Press "Add Charging Station" button.
Input Name: Jagat Charging Station
Province: Bagmati
District: Kathmandu
Metropolitan: Kathmandu
Ward: 22
Fast Charging AC Ports: 2
Fast Charging DC Ports: 3
Regular AC Ports: 4
Regular DC Ports: 4
Nearest Restaurant: 312
Nearest Shopping Mall: 569
Nearest Cinema Hall: -1
Expected Results System does not allow the invalid data and error message is displayed
Observed Results As expected
Assertion Pass

Table 5.7: Test case for getting recommendation without ward
Test Case ID TC-6

Test Scenario Get recommendation of charging station without inputting ward.
Actions Open Recommendations page.
Input the location and check the Exclude Ward checkbox.
Press "Get recommendation" button.
Input Province: Bagmati
District: Kathmandu
Metropolitan: Kathmandu
Expected Results Top 3 charging stations displayed.
Observed Results As expected
Assertion Pass

Table 5.8: Test case for getting recommendation without ward
Test Case ID TC-7

Test Scenario Get recommendation of charging station.
Actions Open Recommendations page.
Uncheck the Exclude Ward checkbox.
Input the location.
Press "Get recommendation" button.
Input Province: Bagmati
District: Kathmandu
Metropolitan: Kathmandu
Ward: 3
Expected Results Top 3 charging stations displayed.
Observed Results As expected
Assertion Pass

Matched Source

Similarity 10%

Title:[The intent of testing is to find problems with the system.](#)

1 What is Testing? Testing is the process of finding errors in the system implementation. –The intent of testing is to find problems with the system.

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Software testing is the act of examining the artifacts and the behavior of the software under test by validation and verification. Software testing can also ...

https://en.wikipedia.org/wiki/Software_testing

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https://sceweb.sce.uhcl.edu/helm/WEBPAGES-SoftwareEngineering/myfiles/TableContents/Module-12/software_testing_overview.html

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Validation ensures the product under development is as per the user ... and is developed adhering to the proper specifications and methodologies. Ensures ...

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