

User Registration

Input Values Required

Input Element	Type	Value Specification	Valid	Invalid	Exceptional Cases
Username	string	Not used by another user	Unique username which does not exist on the system	Username already exists; No Input	N/A
Email	string	Valid email address format	The email address satisfies the email address format	Email address not in the required format; No Input	N/A
Password	string	8 characters and at least 1 number	Password satisfies the set requirements	Password doesn't satisfy the set specifications; No Input	N/A
Re-type Password	string	Same as previous password	Matches previously entered password	Doesn't match previous password; No Input	N/A
Full Name	string	Name and surname	Any string	No Input	N/A

Test Cases

Test case	Username	Email	Password	Re-Type Password	Full Name	Expected Outcome
1	Valid	Valid	Valid	Valid	Valid	Registration successful
2	Invalid	Invalid	Invalid	Invalid	Invalid	Registration failed. Error message displayed
3	Valid	Invalid	Valid	Valid	Valid	Registration failed. Email related message displayed
4	Valid	Valid	Valid	Invalid	Valid	Registration failed. Password related message displayed
5	Invalid	Valid	Valid	Valid	Valid	Registration failed. Username related message displayed

Use Case Based Testing

Test case	Username	Email	Password	Re-type password	Full name	Expected Result	Actual Result
1	U15071830	U15071830@tuks.co.za	Password1	Password1	Munyaradzi Mpofu	Registration successful	Registration successful
2						Registration failed.	Registration Failed
3	U15071830		Password1	Password1	Munyaradzi Mpofu	Registration failed. Email related message displayed	Registration failed. Red border appears around email input field
4	U15071830	U15071830@tuks.co.za	Password1	1234	Munyaradzi Mpofu	Registration failed. Password related message displayed	Registration failed. Red border appears around retype password input field
5		U15071830@tuks.co.za	Password1	Password1	Munyaradzi Mpofu	Registration failed. Username related message displayed	Registration failed. Red border appears around username password input field

Final Mark: 4.5 / 10

Additional Comments:

The application always displays a red border around any invalid input field. Feedback in the form of text could have been given to indicate that the data needs to be filled in before a successful registration can be achieved. For example, a message saying that the passwords are not the same could be displayed. This would help the user as there could be other issues with the password such as it not being long enough or the password is not successful since it may need capital letters or characters.

User Login

Input Values Required

Input Element	Type	Value Specification	Valid	Invalid	Exceptional Cases
Email	string	Valid email address format	The email address satisfies the email address format	Email address not in the required format; No Input Email has not been registered on the system	N/A
Password	string	8 characters and at least 1 number	Password satisfies the set requirements	Password doesn't satisfy the set specifications; No Input; Username does not match password	N/A

Test Cases

Test case	Email	Password	Expected Outcome
1	Valid	Valid	Login successful
2	Invalid	Invalid	Login failed. No input error message displayed
3	Valid	Invalid	Login failed. Username and password related message displayed

Use Case Based Testing

Test case	Email	Password	Expected Outcome	Actual Outcome
1	U15071830@tuks.co.za	Password1	Login successful	Login successful. The user is taken to a view of the map.
2			Login failed. No input error message displayed	Login failed. All the input fields have a red border around them.
3	U15071830@tuks.co.za	Invalid	Login failed. Username and password related message displayed	Login failed. Message box displayed stating "incorrect username or password entered"

Final Mark: 8/10

Additional Comments

Instead of the application taking the user to the navigation page once they have logged in, they could instead be taken to a homepage. When the user leaves the input fields empty, they could also be notified by means of an alert which indicates why the login was unsuccessful.

Edit Profile

Input Values Required

Input Element	Type	Value Specification	Valid	Invalid	Exceptional Cases
Email	string	Valid email address format	The email address satisfies the email address format	Email address not in the required format; No Input; Email address already in use	N/A
Full Name	string	Any space separated string	Any space separated string	No Input;	N/A

Test Cases

Test case	Email	Full name	Expected Outcome
1	Valid	Valid	Profile update successful
2	Invalid	Invalid	Profile update failed. No input error message displayed
3	Invalid	Valid	Profile update failed. Invalid email related error message.

Use Case Based Testing

Test case	Email	Full name	Expected Outcome	Actual outcome
1	U15071830@tuks.co.za	Munyayradzi Mpofu	Profile update successful	Profile update successful
2			Profile update failed. No input error message displayed	Profile update failed. A red border appears around the input fields.
3		Munyayradzi Mpofu	Profile update failed. Invalid email related error message.	Profile update failed. A red border appears around the input fields.

Total Mark: 5/10

Additional Comments: The mark awarded for this module is 5/10 since the process of updating one's profile was not a completely uniform process. This is mainly because the user has to navigate to a different page if they wish to update their password. Marks were also lost since one of the test cases failed. A possible improvement could be to add an input field to the "Edit Profile" page for the user to change their password.

Delete Profile

N/A

GIS (GIS Management)

View GIS Data

Test Case 1

Action: The admin user presses the “Manage GIS” button

Expected Result: The application displays an interface for the admin user to manage locations.

Actual Result: The application displays a list of location names. It is assumed that this is a representation of GIS objects.

Possible Improvements: The list of GIS locations displayed could also include the GPS coordinates of the location to the admin user.

Total Mark: 2/10

Additional Comments: The application is intended to display an interface which an admin user can use to manage GIS locations, but instead it only provides a list of locations and no options to make any changes to these objects.

Add GIS Data

N/A

Edit GIS Data

N/A

Remove GIS Data

N/A

Points of Interest (Location Access)

Search Location

Test Case 1

Action: The search icon is pressed with the intent of searching for a location on the map

Expected Result: The application displays an input field in which the user can enter a location name and search for it

Actual Result: The application displays a list of location names.

Possible Improvements: The application could offer a search bar which the user can use to search for a specific location.

Total Mark: 2/10

Additional Comments: The absence of a search bar when searching for a location could lead to a very inconvenient experience for the user, especially if the user has a large list of saved locations.

Save Location

N/A

Get Current Location

Test Case 1

Action: The “Get Current Location” icon is pressed by the user.

Expected Result: The application will mark the user’s current location on the map

Actual Result: The application marks a location on the map which is not the current user’s location

Possible Improvements: A possible improvement would be to mark the user’s correct location on the map

Final Mark: 2/10

Additional Comments: The application marks a location on the map, although this locations is not the correct location. This would lead to incorrect locations being saved, and could also affect the process of navigating from the users current location to another desired location.

Points of Interest (Location Management)

View Locations

N/A

Add location

N/A

Modify Location

N/A

Remove Location

N/A

Navigation

Navigate to Location

N/A

Save Preferences

N/A