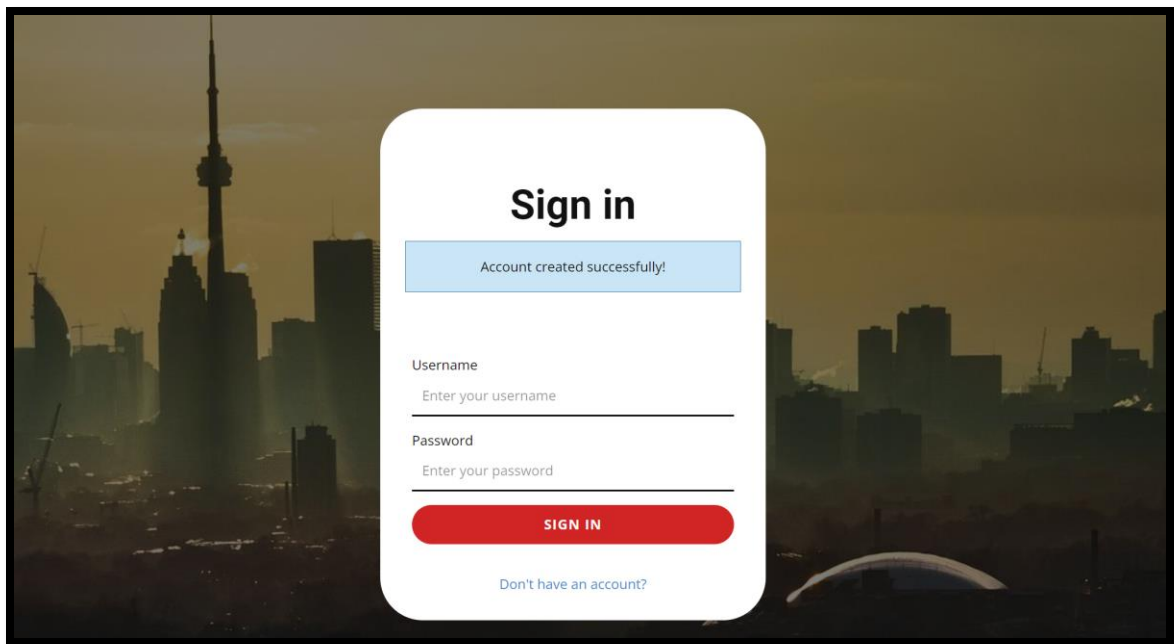


## Use cases testing:

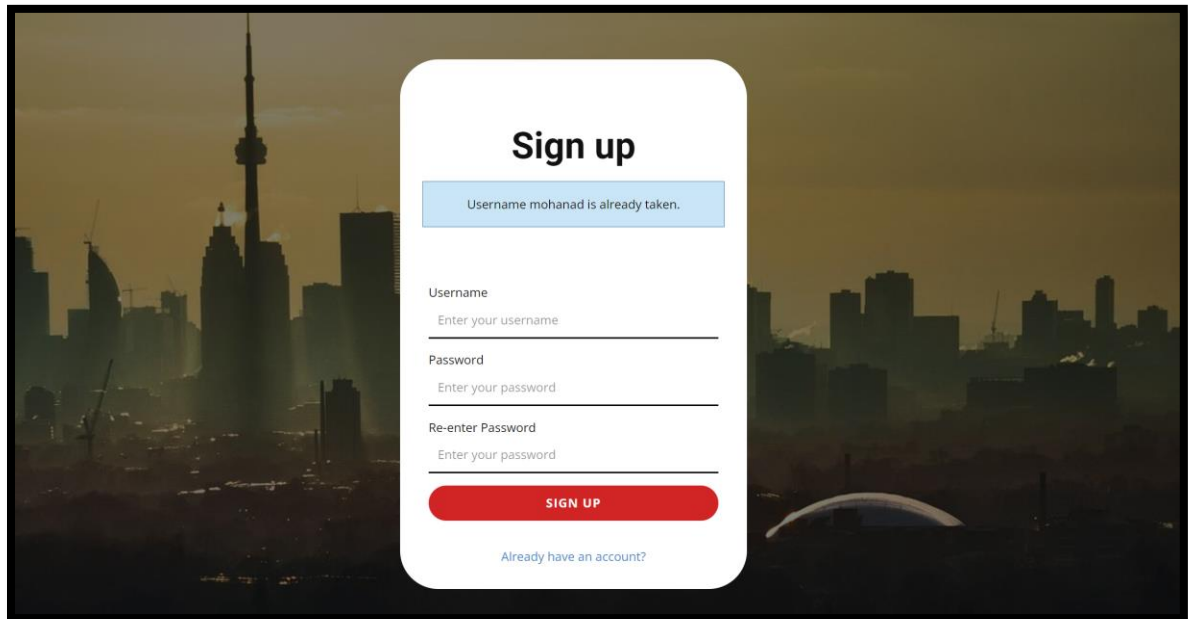
### 1. Normal User Registration

This test case is for the registration of the new members, many scenarios are tested below, and demonstrated with the following pictures:



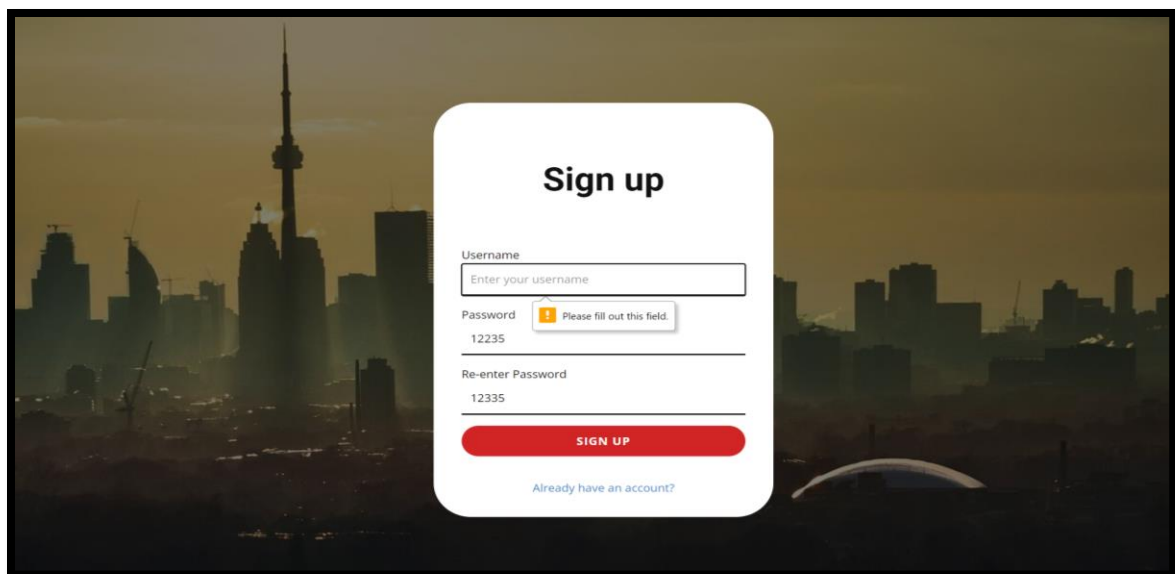
Picture (1.1): Account created successfully

The image above demonstrates the reaction from the web application when the new user created an account by creating username and password “Account created successfully”.



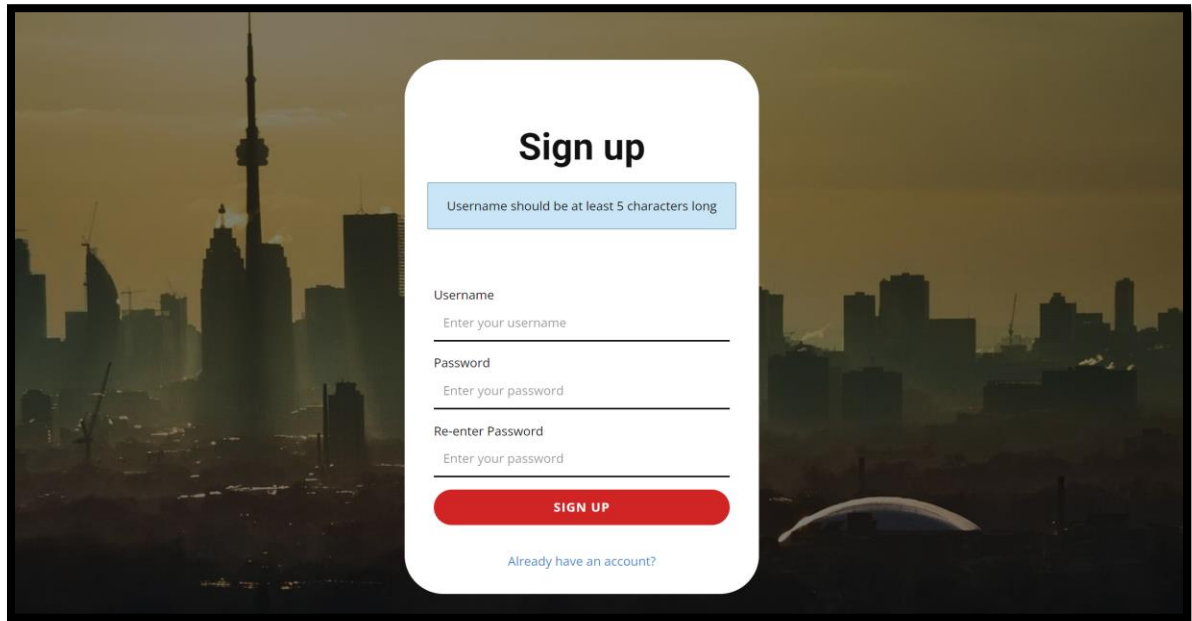
Picture (1.2): User Name Already Taken

The image above demonstrates the reaction from the web application when the new user created an account by already user name taken “Username mohanad is already taken.”.



Picture (1.3): user missed enter username

The image above demonstrates the reaction from the web application for when the user enters different passwords when missed to entire username, a condition message is displayed to inform that “Username is required”.



**Sign up**

Username should be at least 5 characters long

Username  
Enter your username

Password  
Enter your password

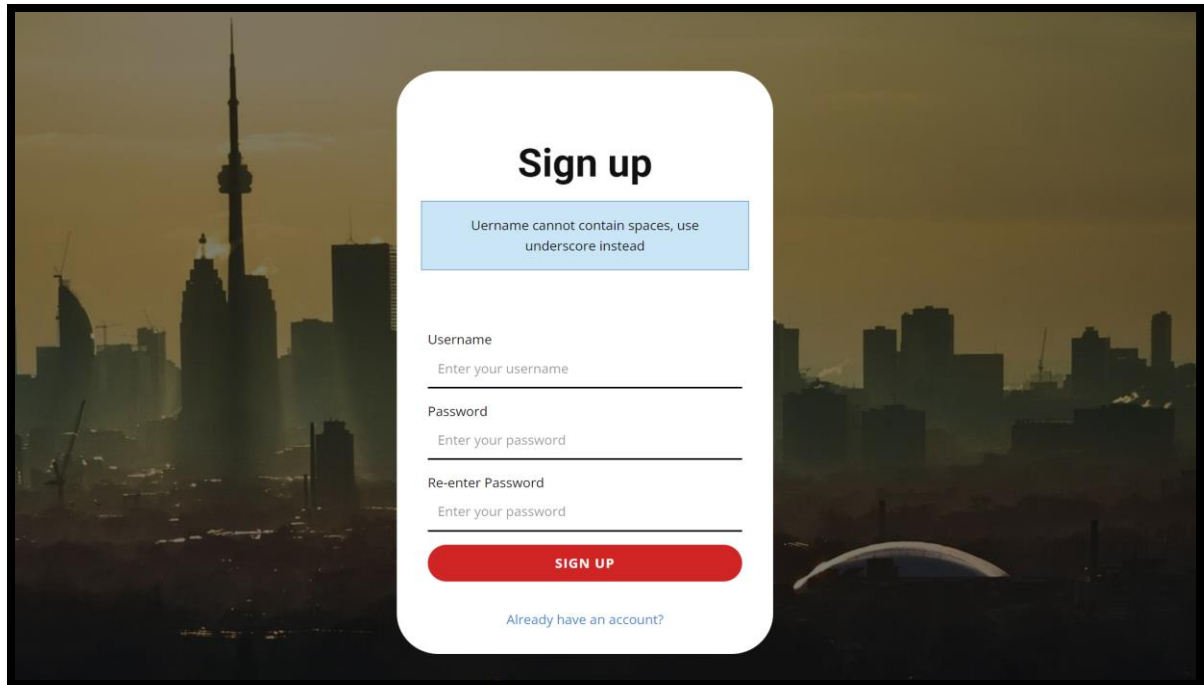
Re-enter Password  
Enter your password

**SIGN UP**

[Already have an account?](#)

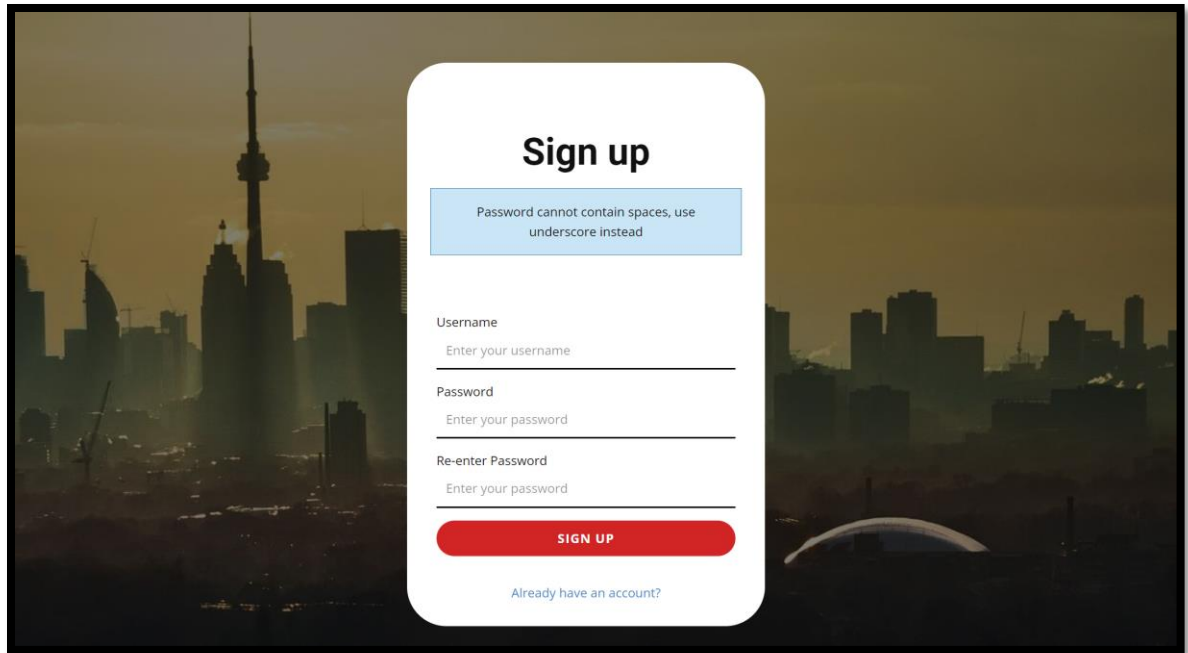
Picture (1.4): username not meeting the criteria

The image above demonstrates the reaction from the web application for when the user enter a username not meeting the criteria, a flash message is displayed to inform the user that “Username should be at least 5 characters long”



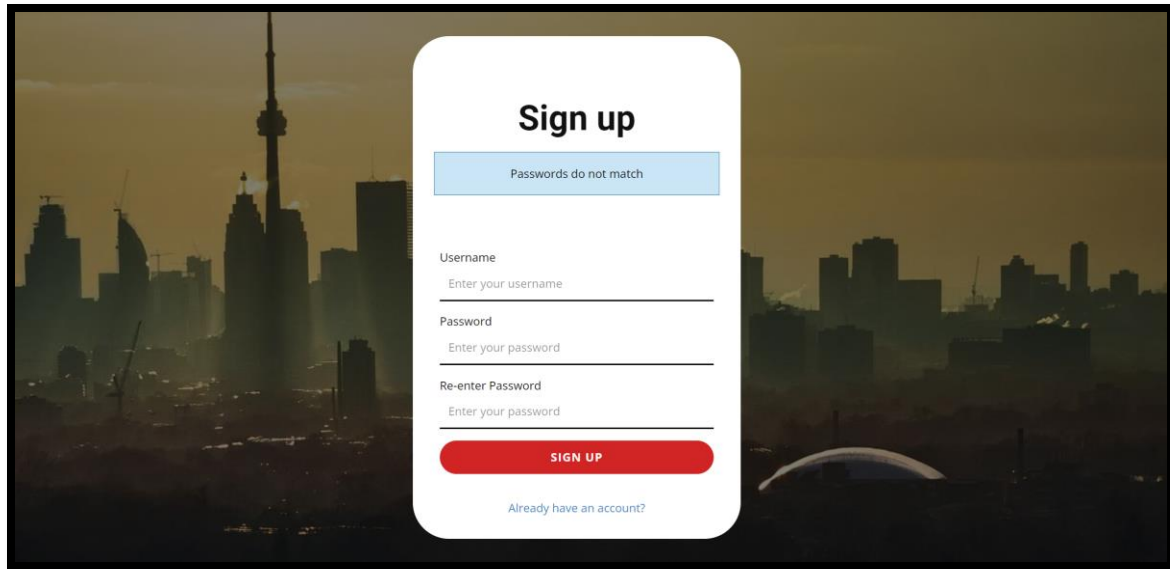
Picture (1.5): username cannot contain spaces

The image above demonstrates the reaction from the web application for when the user enter username with space in the sign up process, a flash message is displayed to inform the user of this “Username cannot contain spaces, use underscore instead”.



Picture (1.6): password cannot contain spaces

The image above demonstrates the reaction from the web application for when the user enter password with space in the sign up process, a flash message is displayed to inform the user of this “password cannot contain spaces, use underscore instead”.



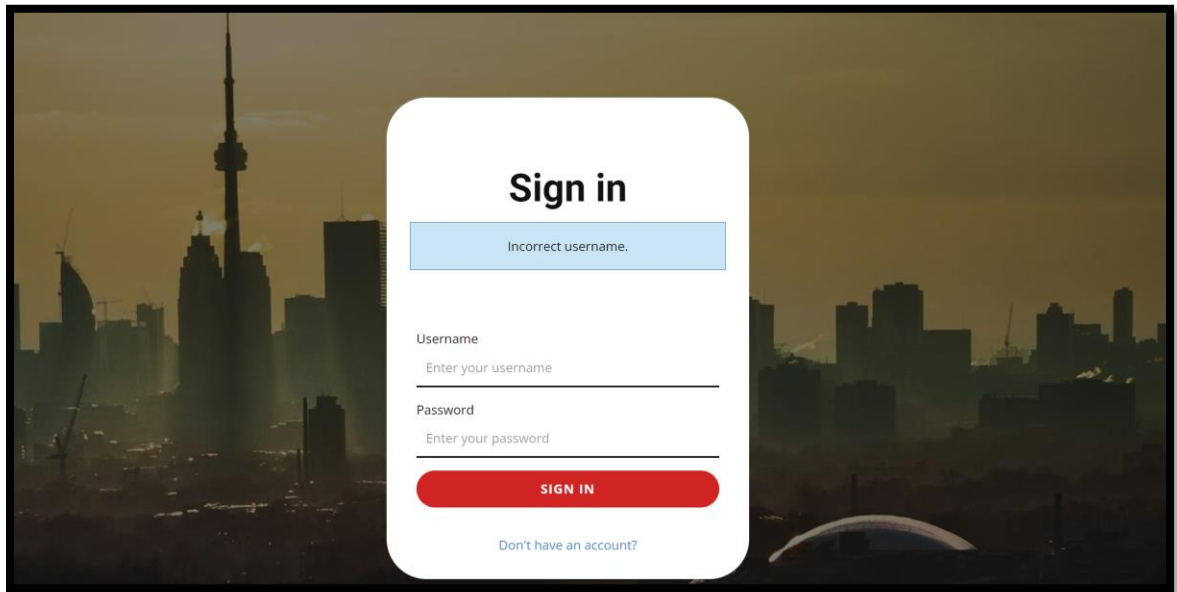
Picture (1.7): Passwords do not match

The image above demonstrates the reaction from the web application for when the user enter password that not match, a flash message is displayed to inform the user of this “Passwords do not match”.

## Use cases testing:

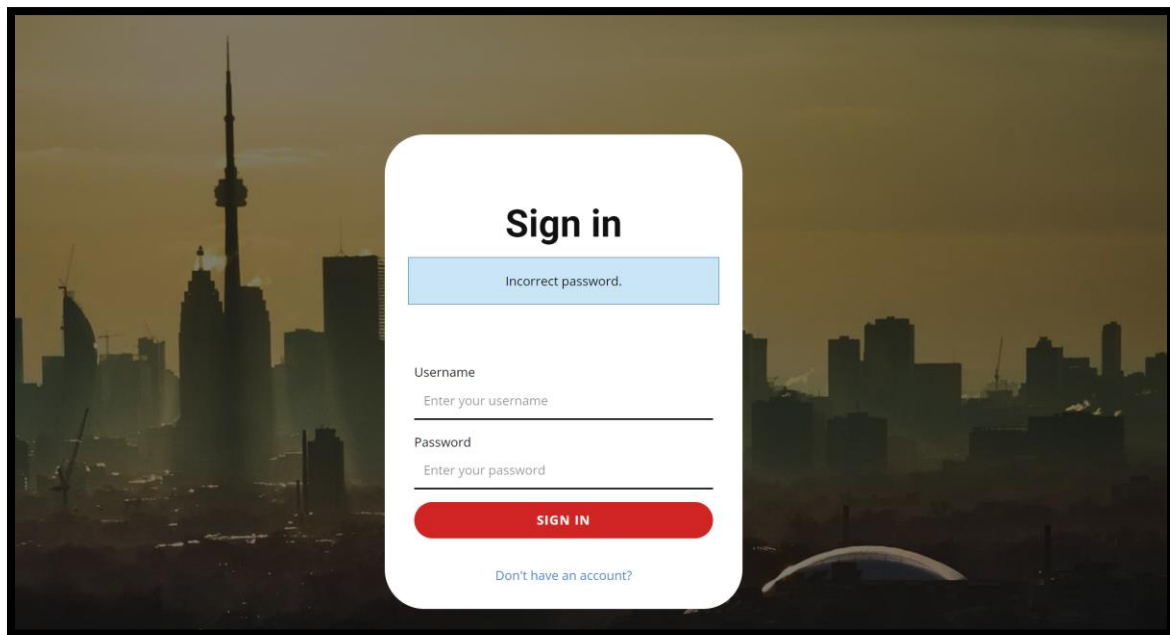
### 2. Normal User sing in

This test case is for the user in of the existing members, many scenarios are tested below, and demonstrated with the following pictures:



Picture (2.1): user enters incorrect sing in username

The image above demonstrates the reaction from the web application for when the user enters incorrect username sing in process, a flash message is displayed to inform the user of that “user enters incorrect sing in username”.



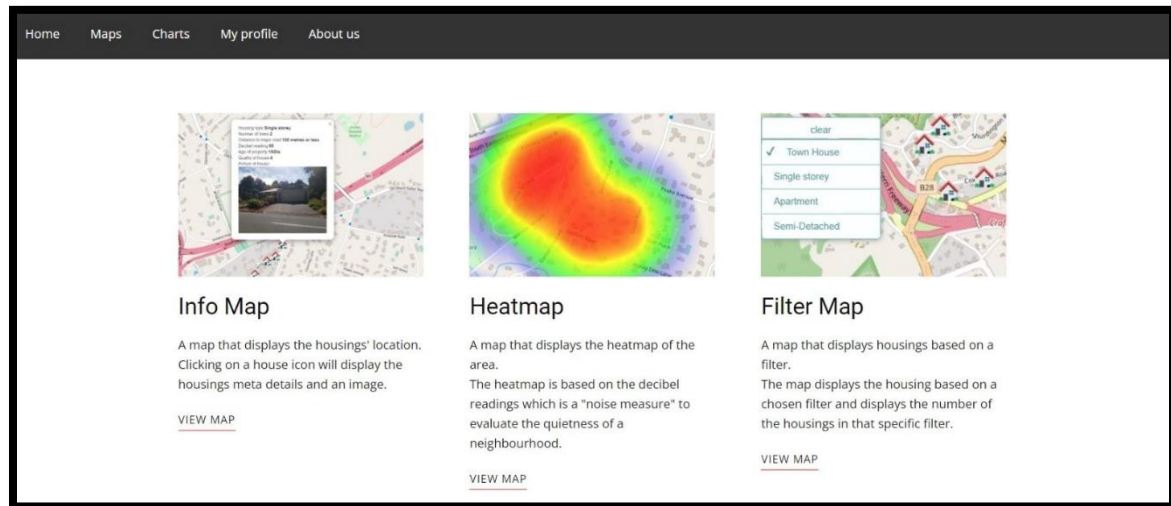
Picture (2.2): user enters incorrect sing in Password

The image above demonstrates the reaction from the web application for when the user enters incorrect Password in sing in process, a flash message is displayed to inform the user of that “user enters incorrect sing in Password”.



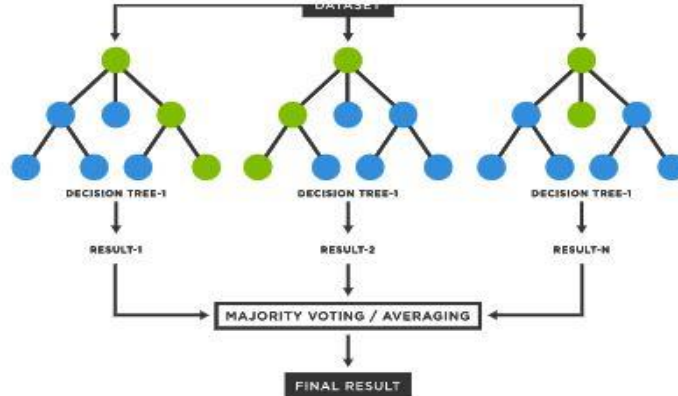
## Use cases testing:

### 3. Data Visualization by Map



Picture (3.1): Map page

When user login to the web page and go to Map page, a different map selection can be visualized, such as, Map Info, Heatmap, Filter Map



## Add & Predict

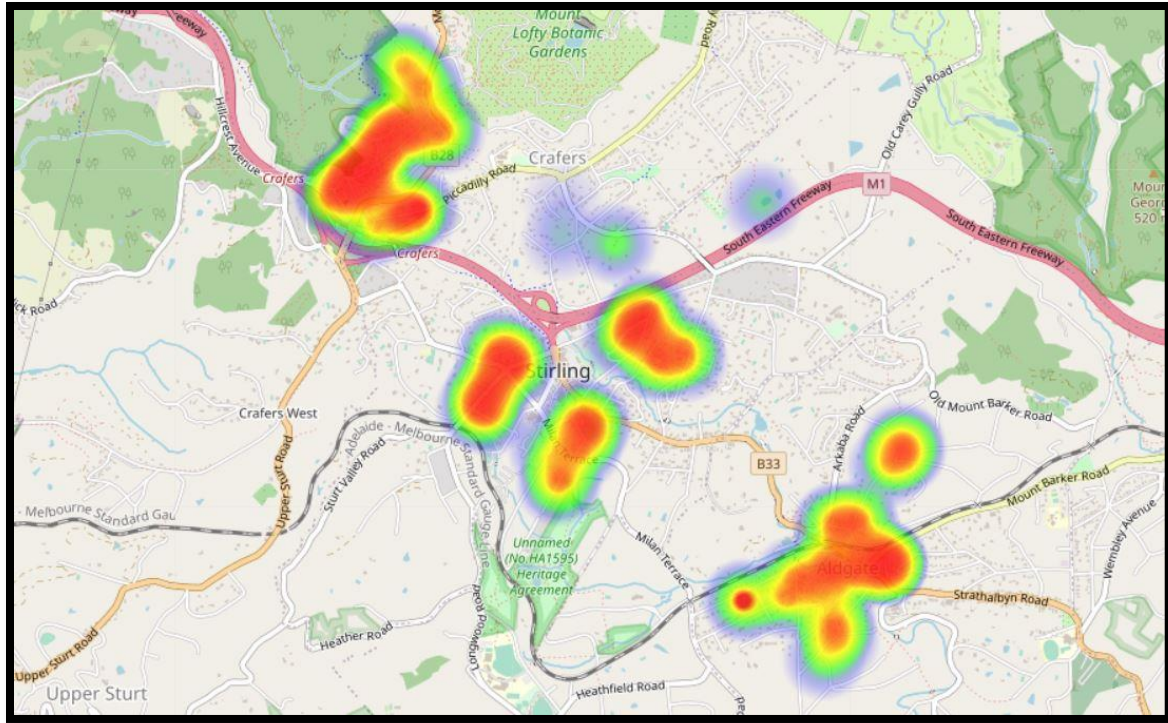
We can do our part of citizen science and submit our new data by clicking on the map.

It will automatically run the machine learning code and predict the quality of house.

[VIEW MAP](#)

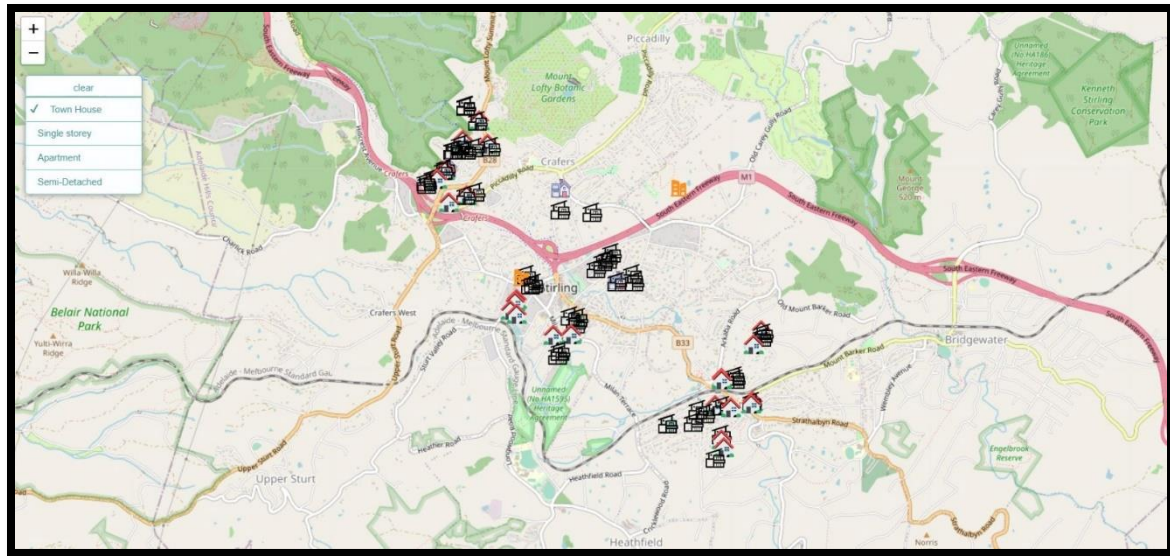
Picture (3.2): Add & predict

Also, user can have the option add & predict geospatially



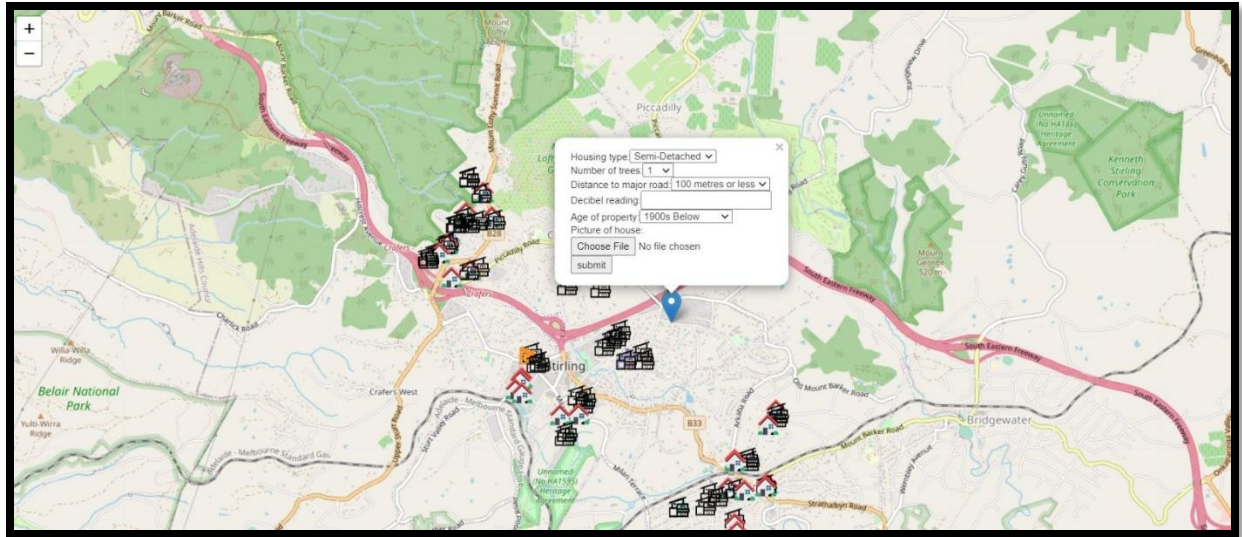
Picture (3.3): Heat-Map

The objective of the heatmap is based on the decibel readings which is a "noise measure" to evaluate the quietness of a neighborhood.



Picture (3.4): Filter-Map

The Filter Map displays the housing based on a chosen filter and displays the number of the housings in that specific filter.



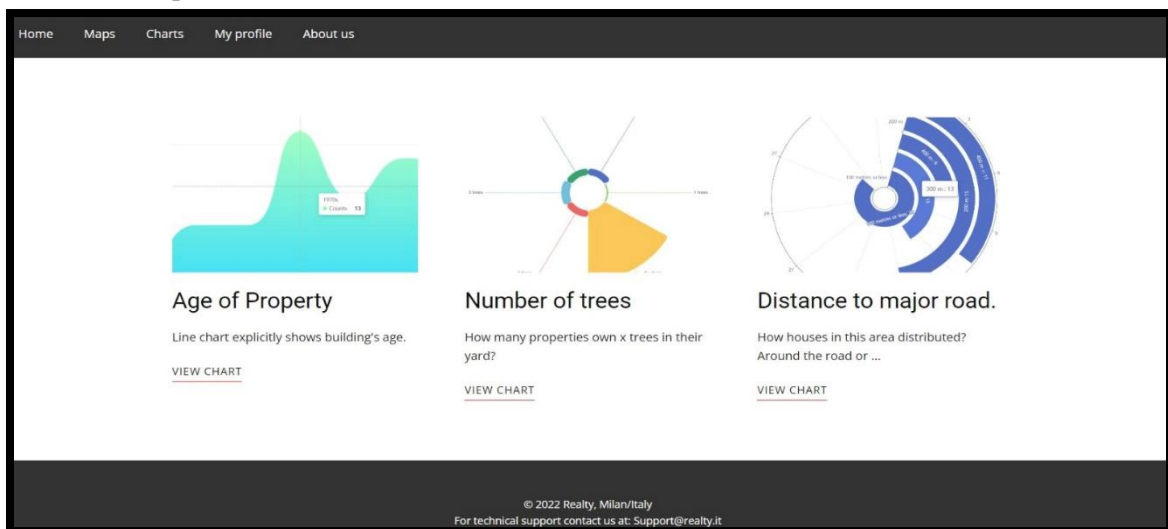
Picture (3.5): Info -Map

An Info map displays the housings' location. By clicking on a house icon will display the housings meta details and an image

## Use cases testing:

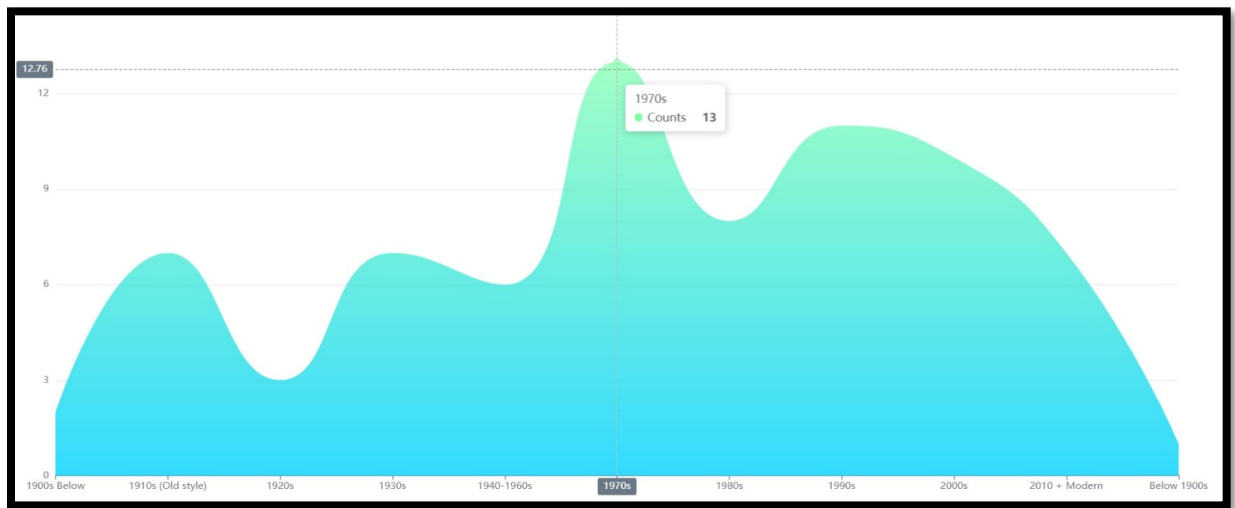
### 4. Data Visualization by chart and plot

The user can enter the interface for interactive analytical tools. by visualizing the following different chart plot;



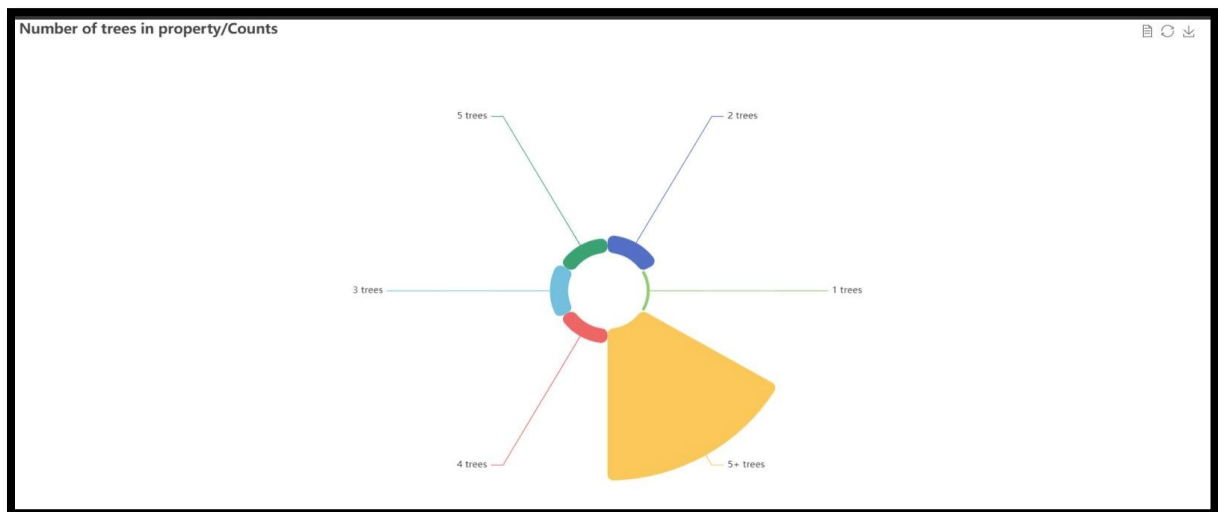
Picture (4.0): Chart Plot interface





Picture (4.1): Age of Property

Line chart can clearly shows building's age.



Picture (4.2): Number of trees

This Chart display How many properties own each household have trees in their yard?



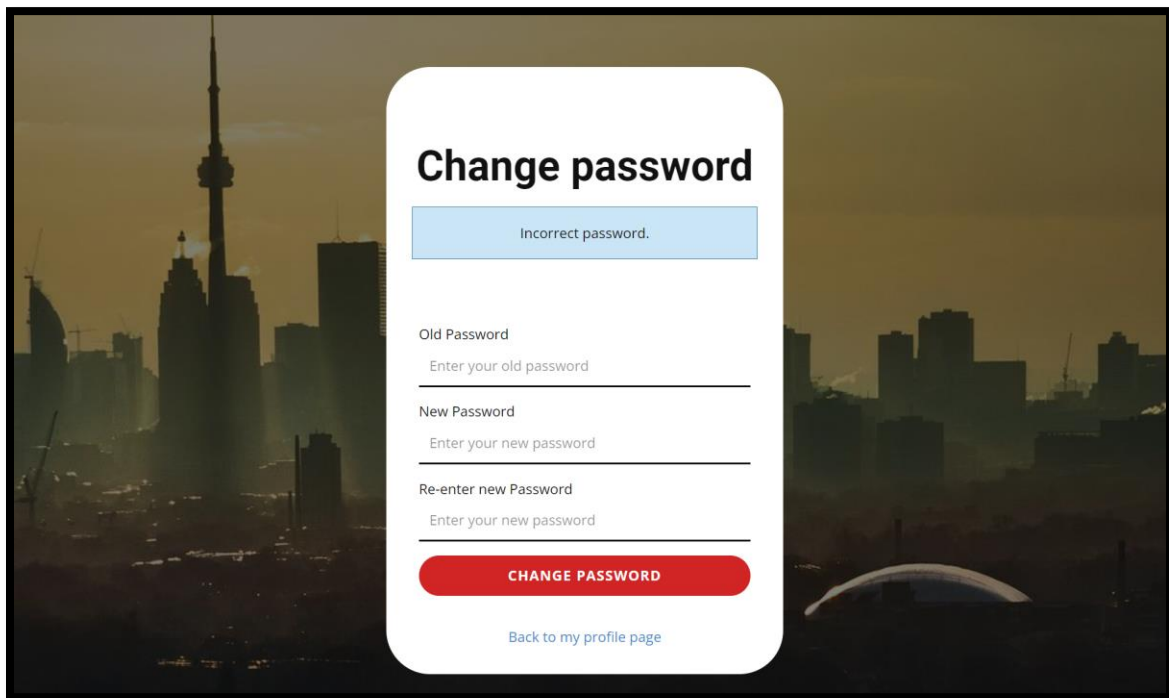
Picture (4.3): Distance to major road

This chart give the user clear visualizing how houses in this area distributed? around the road

## Use cases testing:

### 5. Changing the password

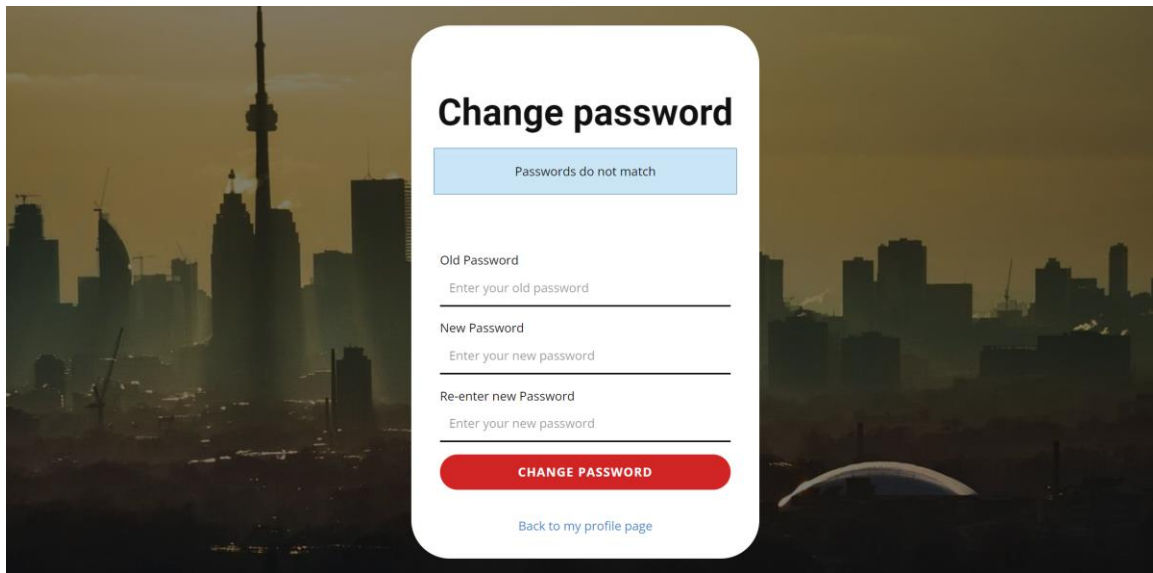
This test case is for the test for user Changing Password the in table below, and demonstrated with the following pictures:



Picture (5.0): Incorrect password for user change Password

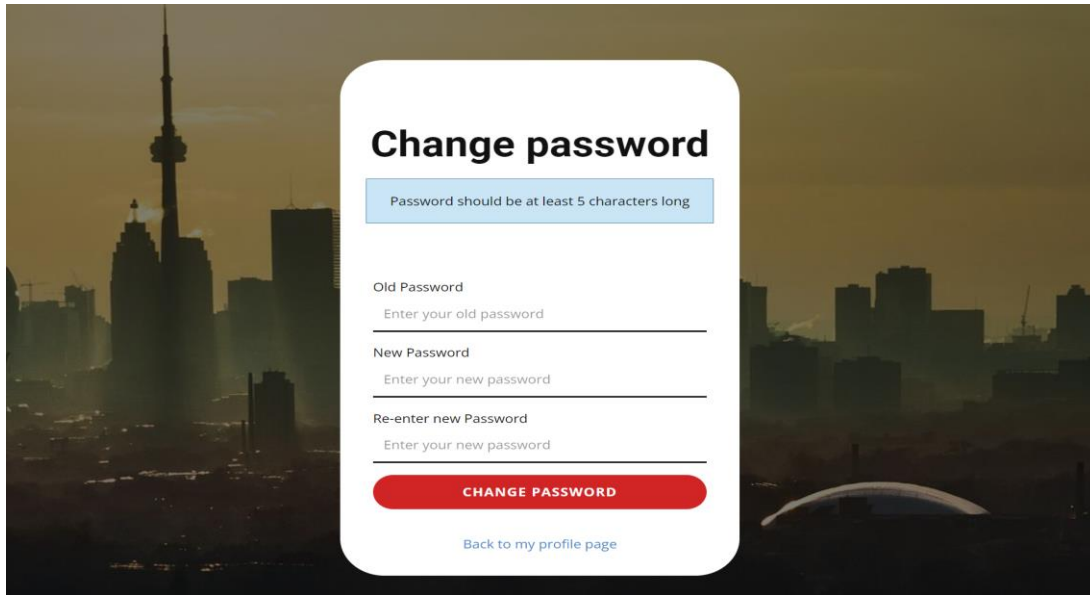
The image above demonstrates the reaction from the web application for when the user enters incorrect Password in changing password process, a flash message is displayed to inform the user of that “user enters incorrect Password”.





Picture (5.1): New Change Passwords do not match

The image above demonstrates the reaction from the web application for when the user enter new password that not match in change Password Process, a flash message is displayed to inform the user of this “Passwords do not match”.



Picture (2): Password not meeting the criteria

The image above demonstrates the reaction from the web application for when the user enter a Password not meeting the criteria, a flash message is displayed to inform the user that “Password should be at least 5 characters long”

## Use cases testing:

### 6. Signing out

This test case is for the test for user signing-out process, and demonstrated with the following pictures:

