C# Assessment 2 - key function

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Introduction

This Windows App Form is to finish the assessment 2 of C# courses in CIT(ICTPRG532-60626 202510).

There is a multi-form app with one main form and four sub forms.

The main form is a menu guiding to the four sub forms.
The four sub form include:

- o 2D Graphic form to draw a house when the form load.
- o Drag and drop form to display image which is drag and drop to the form.
- o Doubly linked list form to transfer a string into linked list and display the linked list from different direction.
- o Nested classes form to create a nested class Engine within the class Car and retrieve information from them.
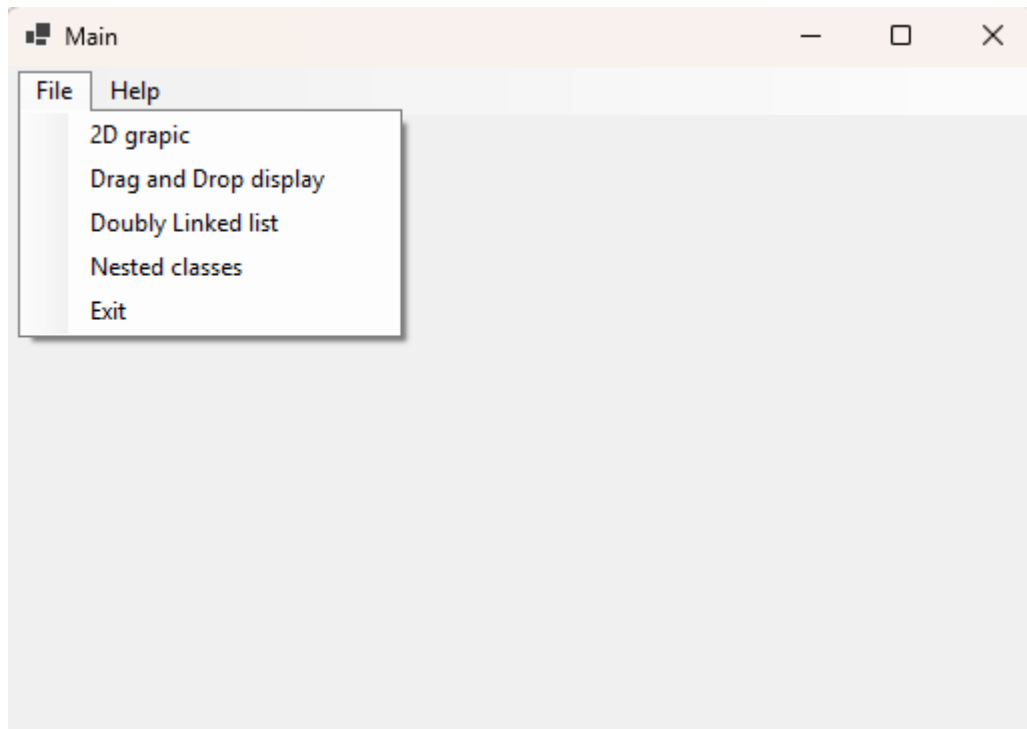
Main Form

Key Function

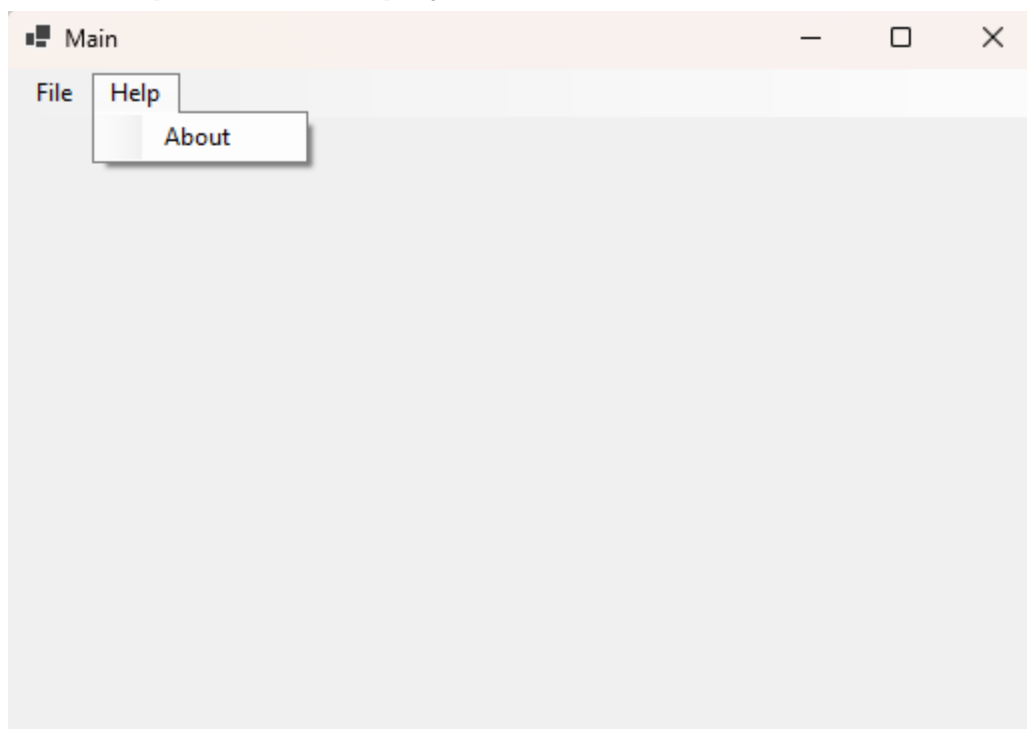**It is empty on the main form. Click the menu to find contents.**

Click 'File' to open menu. Click the item to open sub-form.

*Click 'Exit' to exit the application.

Click 'Help-About' to display author's details.
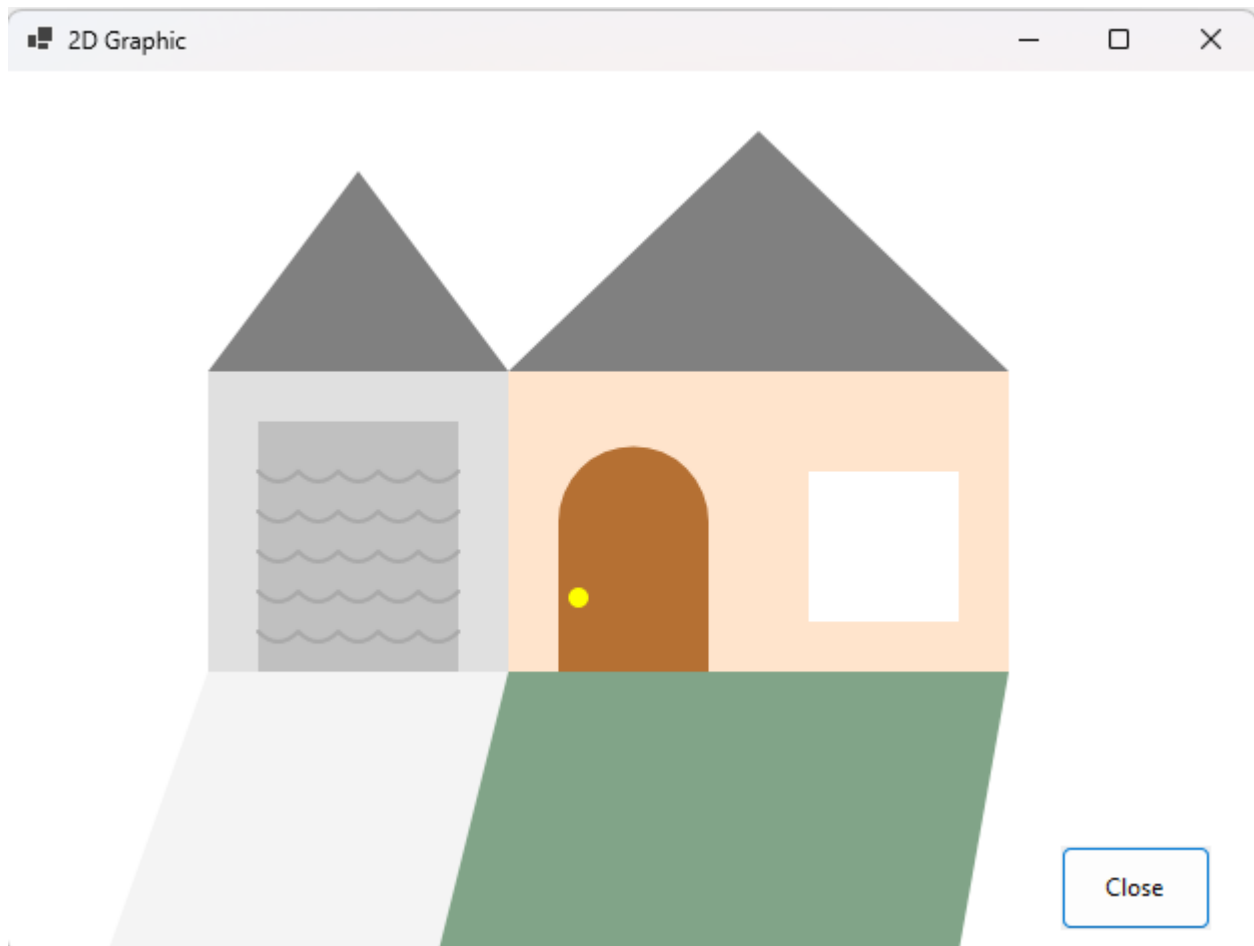
2D Graphic From

Key Function

This form draw a house with garage when the form load.

We use SkiaSharp as a third party painting library here. The house can be divided into several parts:
- The house base, the garage base, the garage door, the window ---- Paint rectangle
- The roofs, the door, the drive way, the garden, the wave line on the garage door ---- Paint path
- The door handle ---- Paint circle
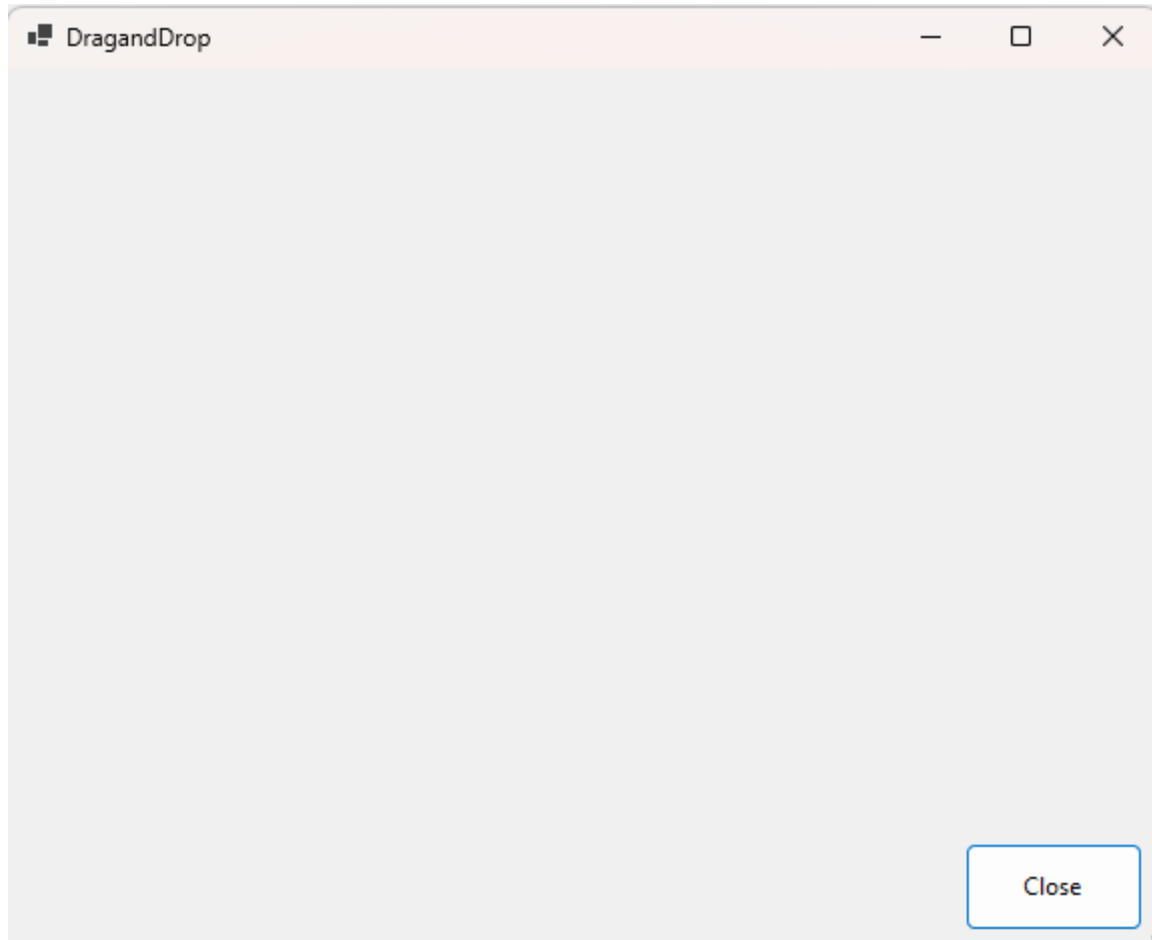
Click 'Close' to exit this form.

Drag and Drop Form

Key Function

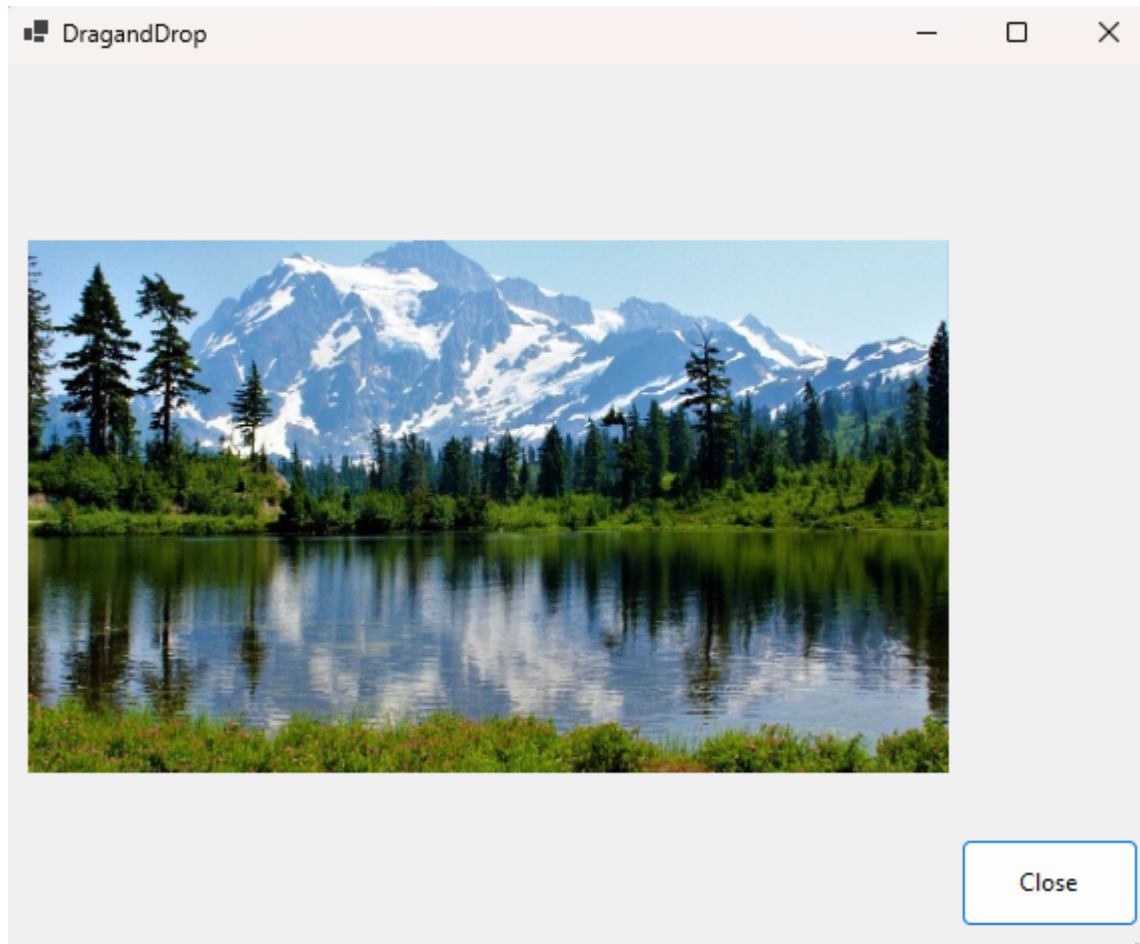**This form is a tool to display image which is drag and drop into the form.**

Open 'bin/picture' to get the sample images.

The image type we can accept are **.jpg, .png, .jepg,.jfif,.pjpeg,.pjp, .gif.**

Click and hold your mouse's left button and drag the image to the form.
The tool will load and open the image and show on the form.

Key Function

Click 'Close' to exit this form.
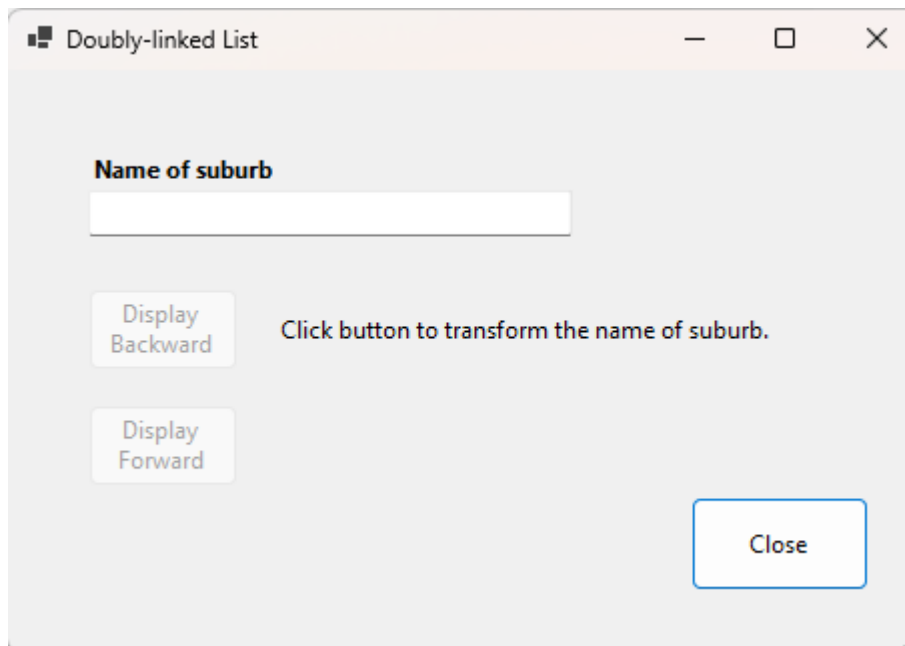
Doubly Linked List Form

Key Function

This form will transform your suburb name into doubly linked list and display in different directions.

After type in any words, a string will be store and then transform into a chars doubly linked list.
When you click the button 'Display Backward', the chars in the linked list will be extract backward from the beginning and combine to a string to display.
When you click the button 'Display Forward', the chars in the linked list will be extract forward from the end and combine to a string to display.
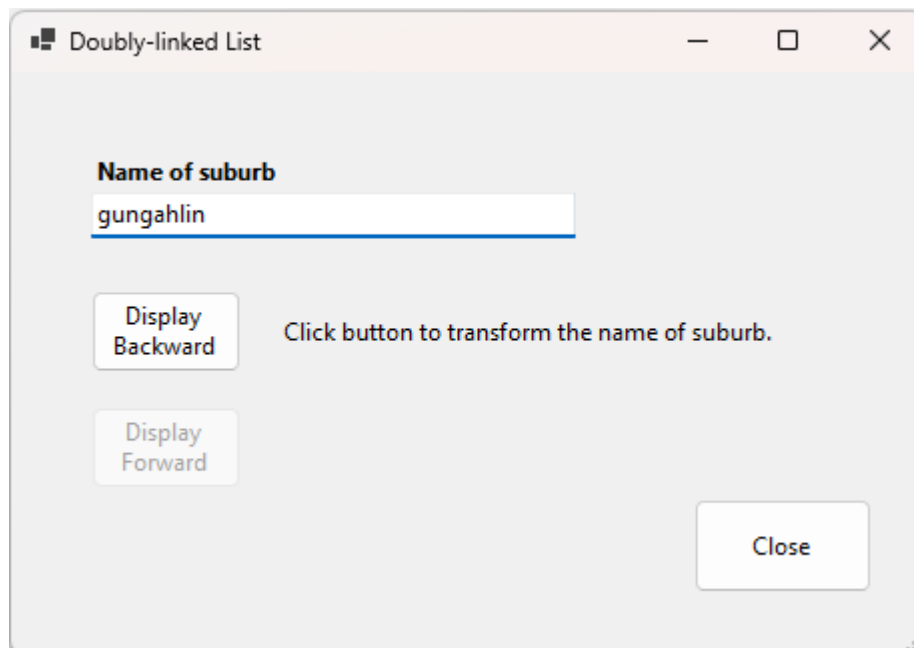Above shows the string is transformed into a doubly linked list.

Type your suburb name into the text box.

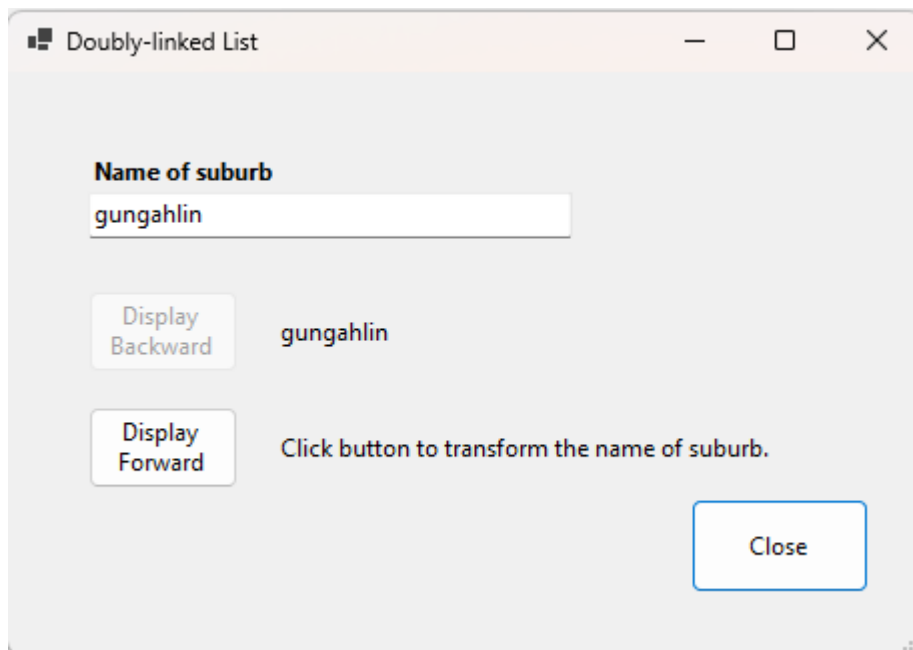After any words typed into the text box, the button 'Display Backward' will be enable.
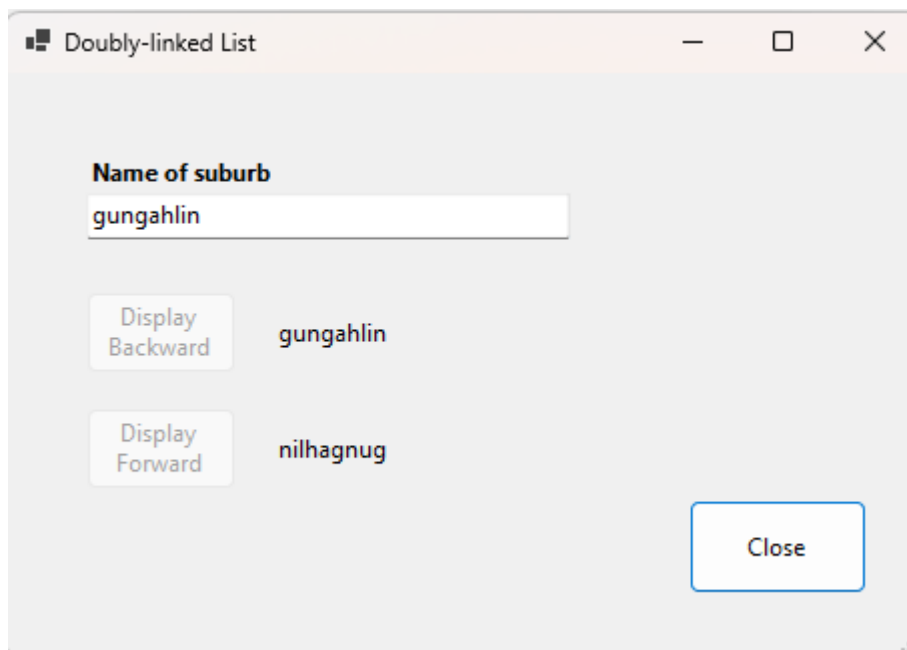

Click the button 'Display Backward', the label on the right will change to the backward name of your suburb (the correct direction).
And the the button 'Display Forward' will be enabled and a instruction will be displayed on its right.
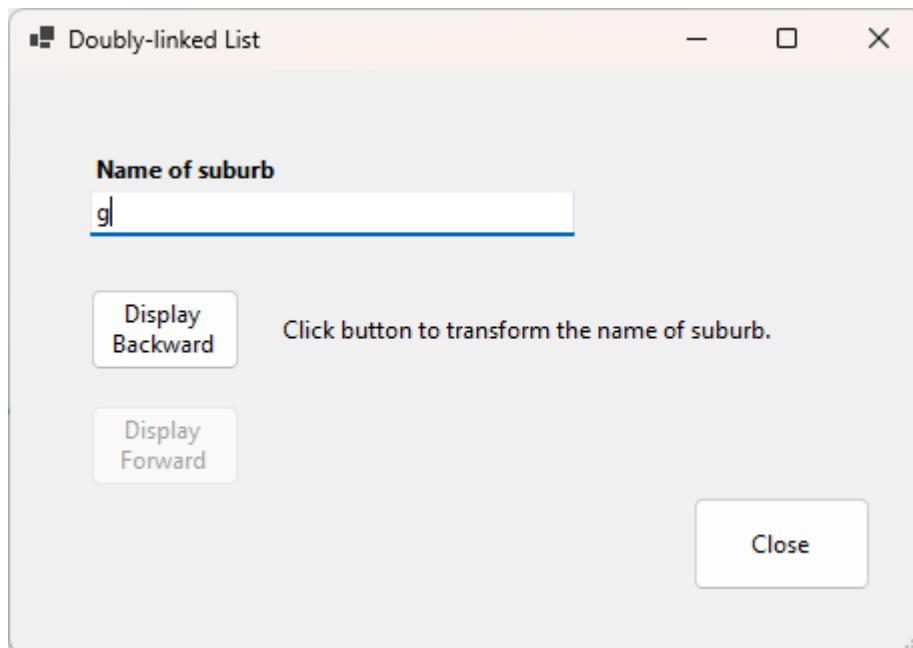
Doubly-linked List

Name of suburb

gungahlin

Display Backward   gungahlin

Display Forward   Click button to transform the name of suburb.

Close

Click the button 'Display Forward', the label on the right will change to the forward name of your suburb (the reverse direction).

Doubly-linked List

Name of suburb

gungahlin

Display Backward   gungahlin

Display Forward   nilhagnug

Close

Change the suburb name any time will reset the buttons and labels.
All buttons will be disable when you delete all words on the text box.

Doubly-linked List — □ ✕

Name of suburb

g|

[Display Backward]   Click button to transform the name of suburb.

[Display Forward]

[Close]

Click 'Close' to exit this form.

Nested Classes Form

Key Function

This form shows information is stored in a nested classes and retrieve from a nested classes.

There is a class 'Car' and a nested class 'Engine' in the 'Car'.
After submit the car's model and engine type, the model name will be stored into the Car's field and the engine type will be stored into the Engine Type's field.
And then, after retrieve these information from the Car and nested class Engine, the car's details will be show in a label.

Types words into the text boxes.

Click the button 'Submit'.

The car details will be shown on the label.

Click 'Close' to exit the form.