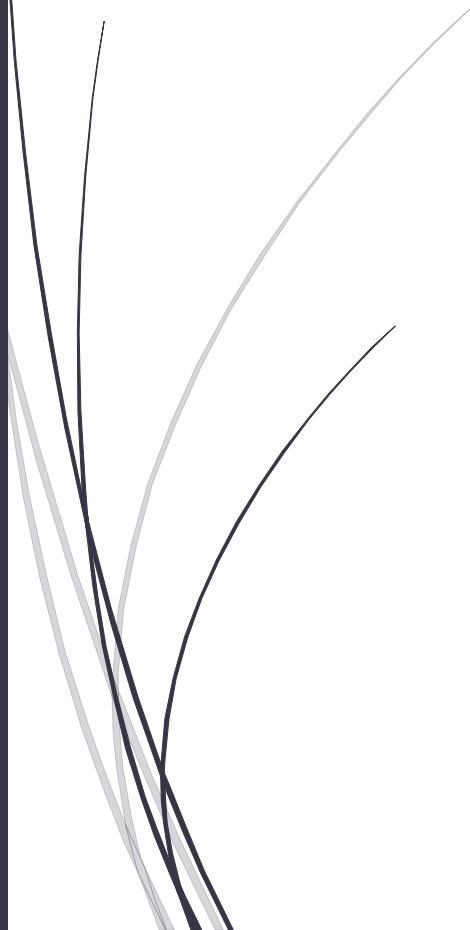


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Computer Games Collection

Program Report



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Introduction

The computer games collection program was created to allow users to organise and track their computer game collection via an automatically sorted list.

The program needed to allow the user to perform the following actions:

- Add and delete entries into the list
- Search for entries in the list
- Update or change the values of a selected entry within the list
- Clear the list of all user entered data
- Save the collected data into a binary file upon closing the program
- Load pre-saved data into the program and populate the list from the saved data when the program executes
- Display tooltips for textboxes explaining their function

Analysis

The following table will itemise the functional aspects of the program:

| | |
|----------------|--|
| Input | <ul style="list-style-type: none">• User entered string data to text box fields• Click events on buttons• List Box index selection for various features• Binary file data |
| Process | <ul style="list-style-type: none">• Add string data to array with entries controller• Delete string data from array with entries controller• Clear data from textbox controls• Reset locally saved array data with entries controller• Update selected list box entry with new data from textbox controls• Search for array data that matches data added to "Name:" textbox controller• Save current "entries" and array data to binary file• Save current "entries" and array data to binary file on click and program termination• Load saved binary file data into "entries" and array variables on click and program execution |
| Output | <ul style="list-style-type: none">• Display sorted added entries in list box• Display error message advising all fields not entered• Remove deleted entries from list box• Show empty textbox controls on "Clear" click• Show empty list box on "Reset" click• Show updated information in list box on "Update" click• Display error message advising all fields not entered• Select list box index matched to string "Name" textbox controller input• Display error message advising search not found• Create/Overwrite binary file• Display data loaded from binary file within list box• Display message advising no save data was found |

Test Data

| Test Case | Description | Expected Outcome | Evidence |
|-----------|--------------------------------|---|-------------------------------|
| Case 1. | Add game | Data is added to arrays then sorted and list box is populated with array data | Refer to Screenshot 1 |
| Case 2 | Add game (missing data) | Display Error Message | Refer to Screenshot 2 |
| Case 3 | Delete Game | Data is removed from array based upon list box selection and list box is updated with modified array data | Refer to Screenshot 3 |
| Case 4 | Delete games (no selection) | Display error message | Refer to Screenshot 4 |
| Case 5 | Clear Fields | Clears the textboxes of any data from selection or | Refer to Screenshot 5 |
| Case 6 | Reset Data | Resets array controller to '0", repopulates list box with reset array controller values | Refer to Screenshot 6 |
| Case 7 | Update Entry | Updates data values of selected entry with new data added to text box fields | Refer to Screenshot 7 and 8 |
| Case 8 | Search for Entry | Searches name array for the exact match of the name field and selects appropriate index in list box | Refer to Screenshot 9 and 10 |
| Case 9 | Save on Click | Saves array data into binary file upon button click | Refer to Screenshot 11 and 12 |
| Case 10 | Load on Click | Loads Array data from previously saved dat file upon button click | Refer to Screenshot 13 and 14 |
| Case 11 | Load on Click (no save file) | Displays message advising there is no save data to load | Refer to Screenshot 15 |
| Case 12 | Load on Execute | Loads Array data from previously saved dat file upon form execution | Refer to Screenshot 16 |
| Case 13 | Load on Execute (no save file) | Displays message advising there is no save data to load | Refer to Screenshot 17 |
| Case 14 | Save on Form Close | Saves the current array data into binary file on program close | Refer to Screenshot 18 |

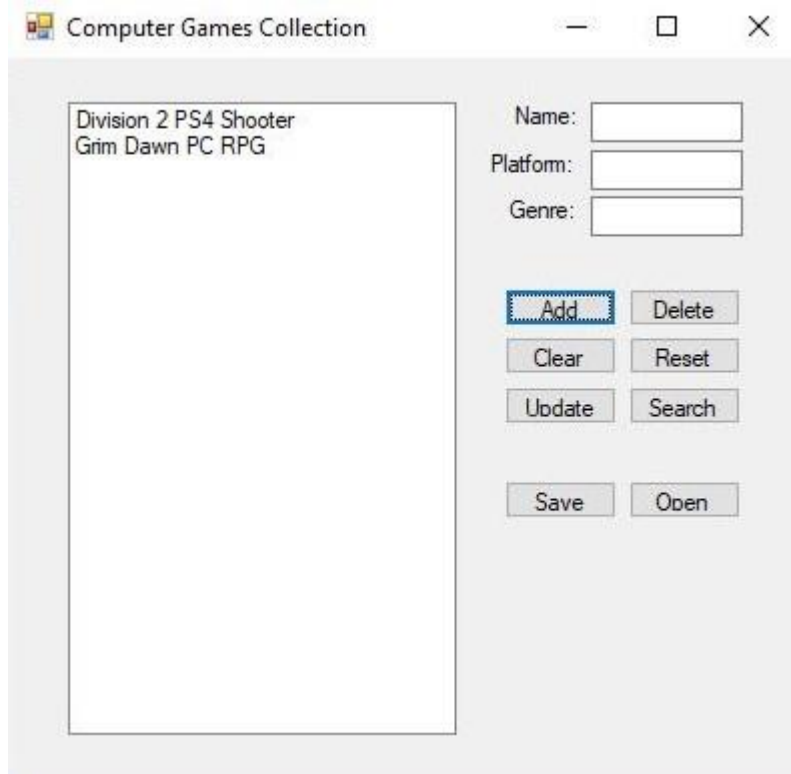
| | | | |
|---------|-----------------|---|------------------------|
| Case 15 | Display Tooltip | Displays tooltips on text field mouseover | Refer to Screenshot 19 |
|---------|-----------------|---|------------------------|

Program Code

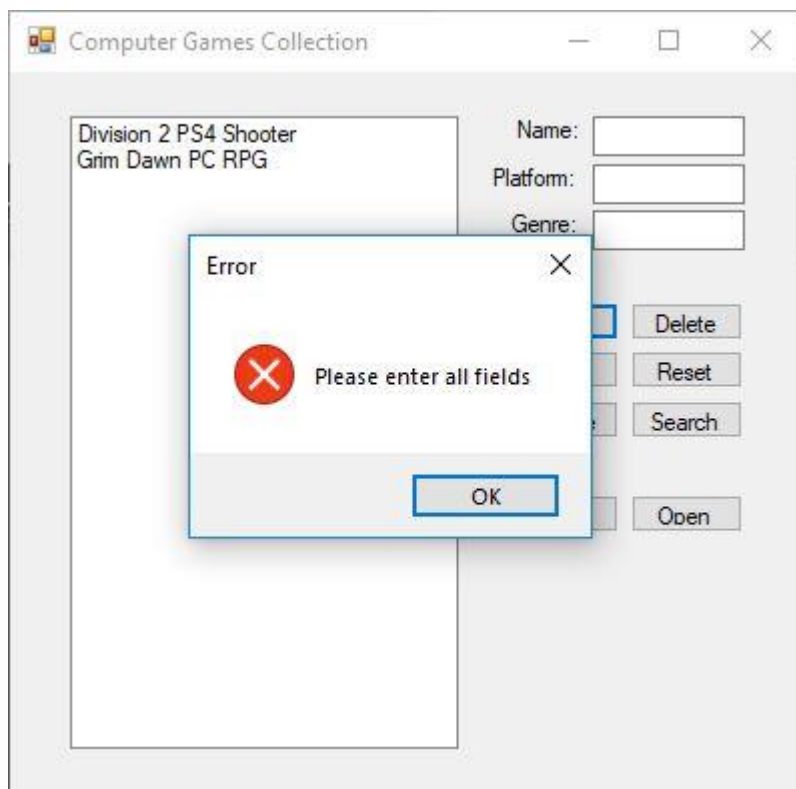
- DisplayNames()
 - Display names method to populate entries into listbox
- ClearTBs()
 - Clears the textbox controls of any data
- BubbleSort(string[])
 - Sorts entries by alphabetical order of names array
- BinarySearch(string[], string)
 -) Searches the listbox for matched strings based on user input in the "Name" control
- WriteFile(int, string[], string[], string[])
 - Save "entries" and array data into binary file
- ReadFile()
 - Read "entries" and array data from previously saved binary file

Reference Material

Screenshot 1



Screenshot 2



Screenshot 3

The screenshot shows a window titled "Computer Games Collection". On the left, there is a list box containing the text "Division 2 PS4 Shooter". On the right, there is a form with three input fields labeled "Name:", "Platform:", and "Genre:". Below these fields are several buttons: "Add", "Delete" (highlighted with a blue dashed border), "Clear", "Reset", "Update", "Search", "Save", and "Open".

Screenshot 4

The screenshot shows the same "Computer Games Collection" window as in Screenshot 3. A modal dialog box is now open in the foreground. The dialog box has a title bar with a close button (X) and contains the text "Select an item". Below the text is an "OK" button. The "Delete" button in the background window is still highlighted with a blue dashed border.

Screenshot 5

Computer Games Collection

The Division 2 PS4 Shooter

Name:

Platform:

Genre:

Add Delete

Clear Reset

Update Search

Save Open

Detailed description: This is a screenshot of a Windows application window titled 'Computer Games Collection'. On the left side, there is a list box containing one item, 'The Division 2 PS4 Shooter', which is highlighted with a blue background. To the right of the list box, there are three text input fields labeled 'Name:', 'Platform:', and 'Genre:'. Below these fields is a grid of buttons. The first row contains 'Add' and 'Delete'. The second row contains 'Clear' (which is highlighted with a blue border) and 'Reset'. The third row contains 'Update' and 'Search'. At the bottom of the button grid are 'Save' and 'Open' buttons.

Screenshot 6

Computer Games Collection

Name:

Platform:

Genre:

Add Delete

Clear Reset

Update Search

Save Open

Detailed description: This is a screenshot of the same 'Computer Games Collection' application window. The list box on the left is now empty. The 'Name:', 'Platform:', and 'Genre:' input fields remain. The button layout is identical to Screenshot 5, but in this view, the 'Reset' button in the second row is highlighted with a blue border, while the 'Clear' button is no longer highlighted.

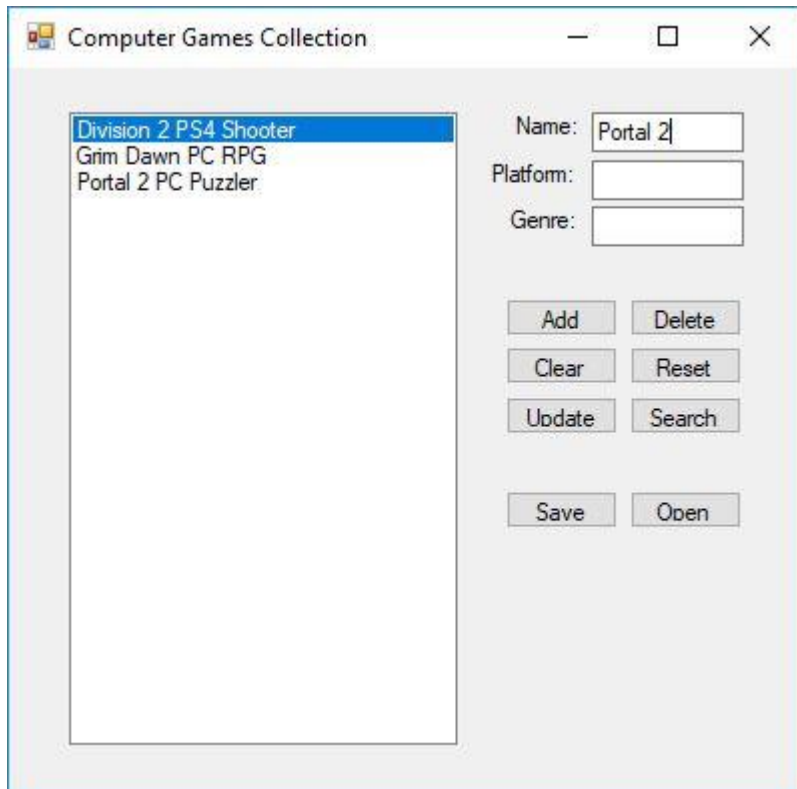
Screenshot 7

A screenshot of a Windows application window titled "Computer Games Collection". The window has a standard Windows title bar with minimize, maximize, and close buttons. The main area is divided into two sections. On the left is a large, empty rectangular box. On the right is a form with three input fields labeled "Name:", "Platform:", and "Genre:". Below these fields are several buttons: "Add", "Delete", "Clear", "Reset" (highlighted with a blue border), "Update", "Search", "Save", and "Open".

Screenshot 8

A screenshot of the same "Computer Games Collection" application window. The left rectangular box now contains the text "Grim Dawn PC RPG". The form fields on the right are filled with "Grim Dawn" for Name, "PC" for Platform, and "RPG" for Genre. The buttons remain the same, but the "Update" button is now highlighted with a blue border.

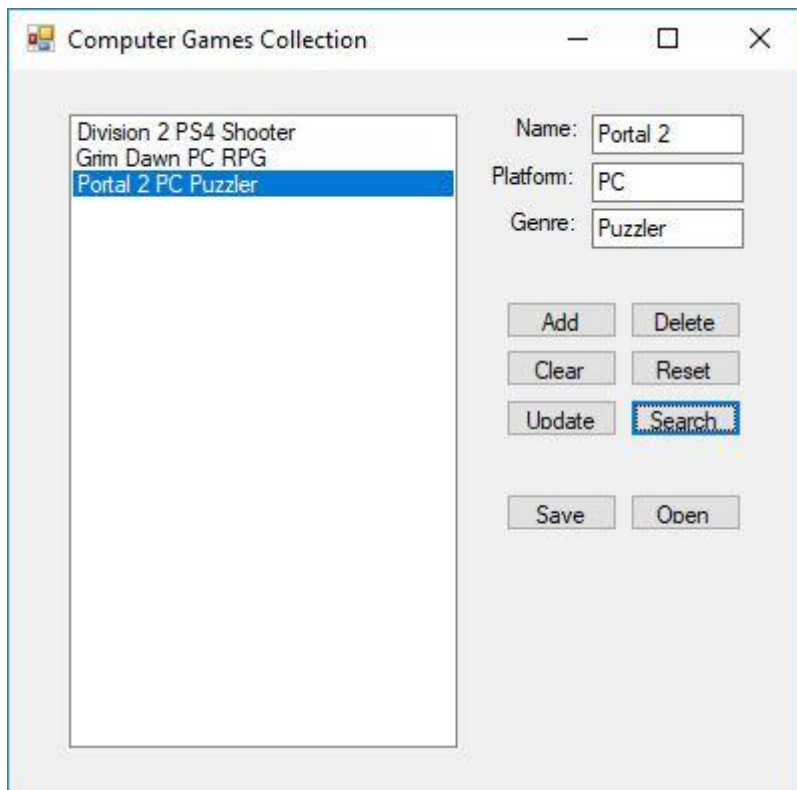
Screenshot 9



A screenshot of a Windows application window titled "Computer Games Collection". The window has a standard Windows title bar with minimize, maximize, and close buttons. On the left side, there is a list box containing three items: "Division 2 PS4 Shooter", "Grim Dawn PC RPG", and "Portal 2 PC Puzzler". The first item is currently selected. To the right of the list box, there are three text input fields labeled "Name:", "Platform:", and "Genre:". The "Name:" field contains the text "Portal 2". Below these fields is a grid of buttons: "Add", "Delete", "Clear", "Reset", "Update", and "Search". At the bottom of the right panel, there are two more buttons: "Save" and "Open".

| Game Title | Name | Platform | Genre |
|------------------------|----------|----------|-------|
| Division 2 PS4 Shooter | Portal 2 | | |
| Grim Dawn PC RPG | | | |
| Portal 2 PC Puzzler | | | |

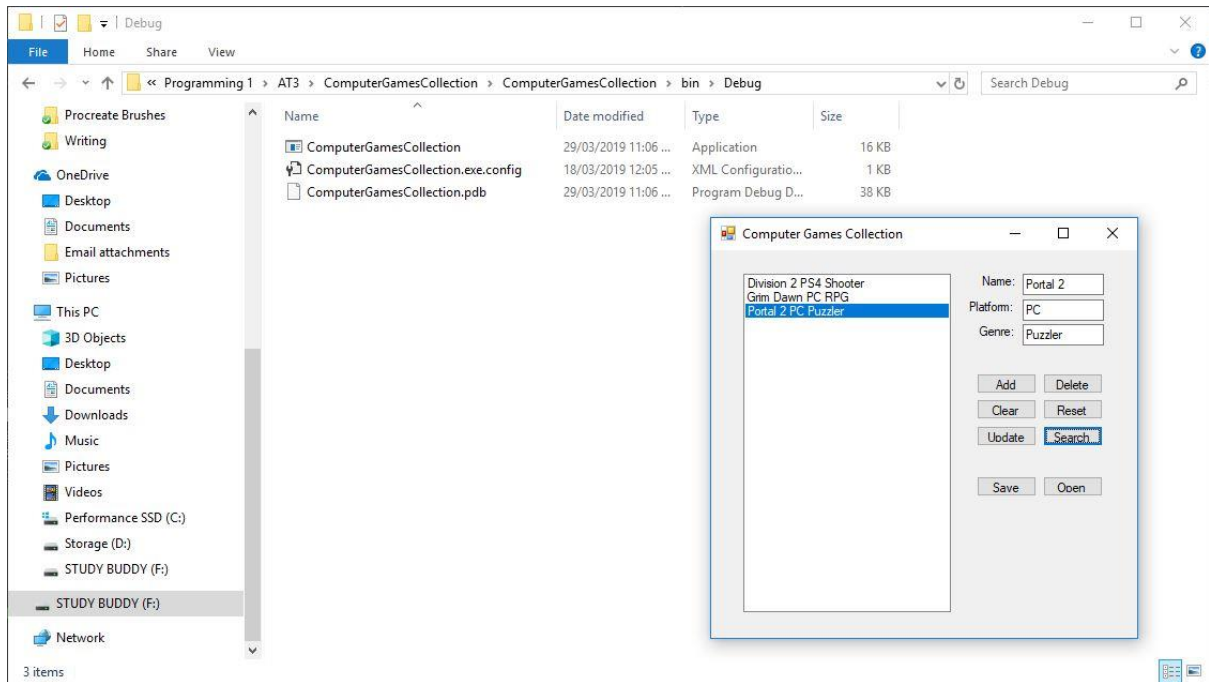
Screenshot 10



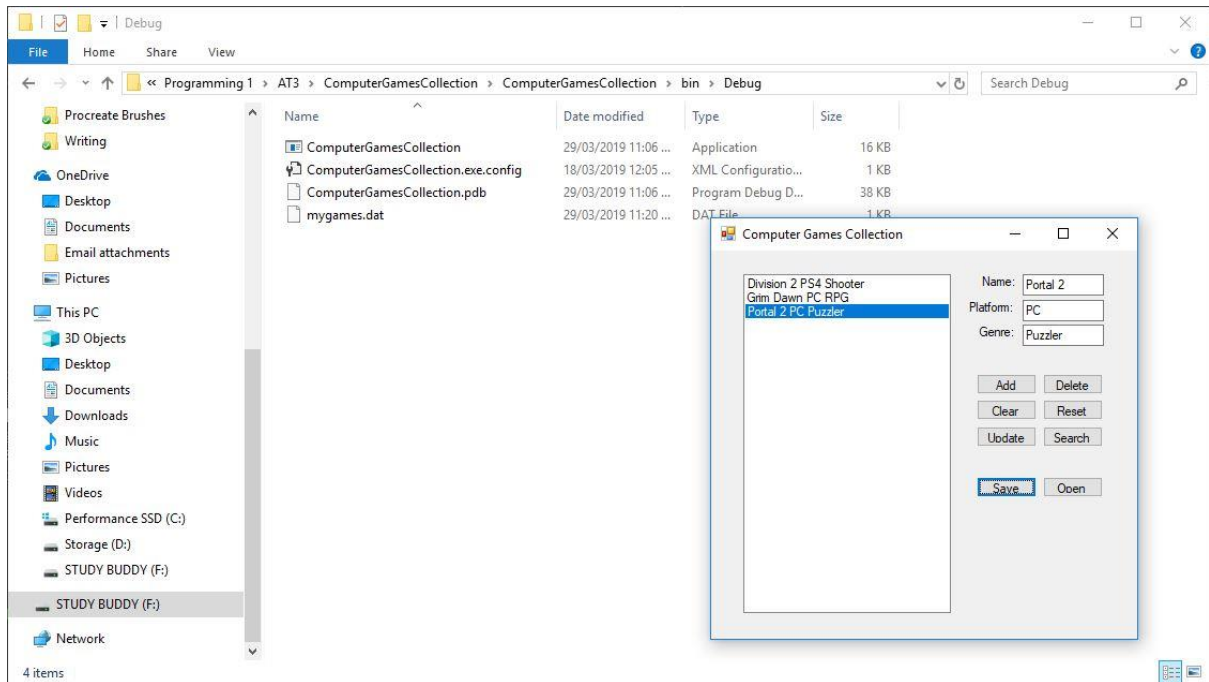
A screenshot of the same "Computer Games Collection" window. In this state, the third item in the list box, "Portal 2 PC Puzzler", is selected. The "Name:" field still contains "Portal 2". The "Platform:" field now contains the text "PC". The "Genre:" field now contains the text "Puzzler". The "Search" button in the button grid is highlighted with a blue dashed border, indicating it is the active or focused element.

| Game Title | Name | Platform | Genre |
|------------------------|----------|----------|---------|
| Division 2 PS4 Shooter | Portal 2 | PC | Puzzler |
| Grim Dawn PC RPG | | | |
| Portal 2 PC Puzzler | | | |

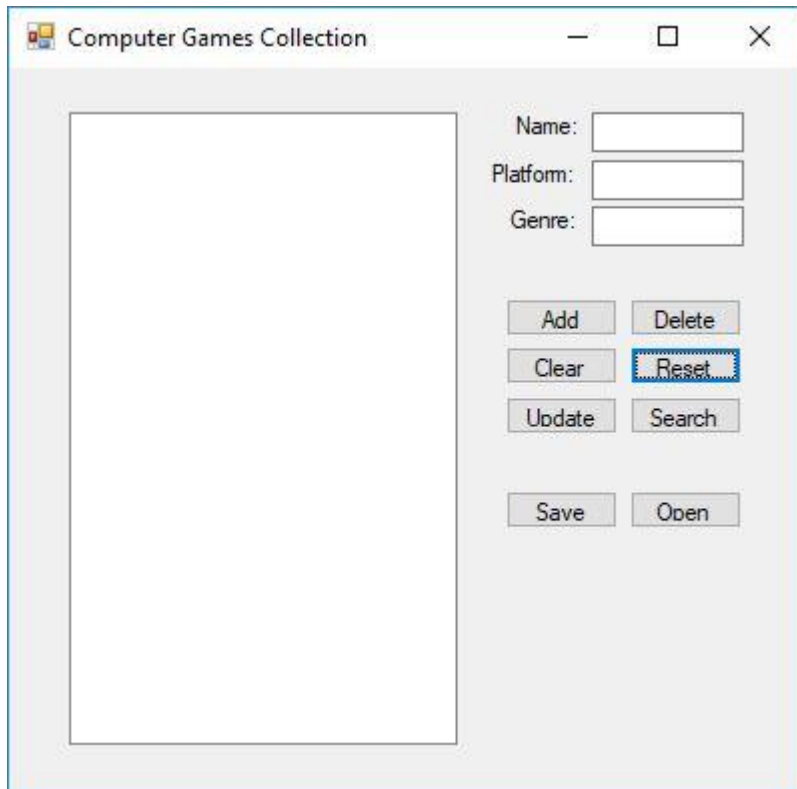
Screenshot 11



Screenshot 12



Screenshot 13



Computer Games Collection

Name:

Platform:

Genre:

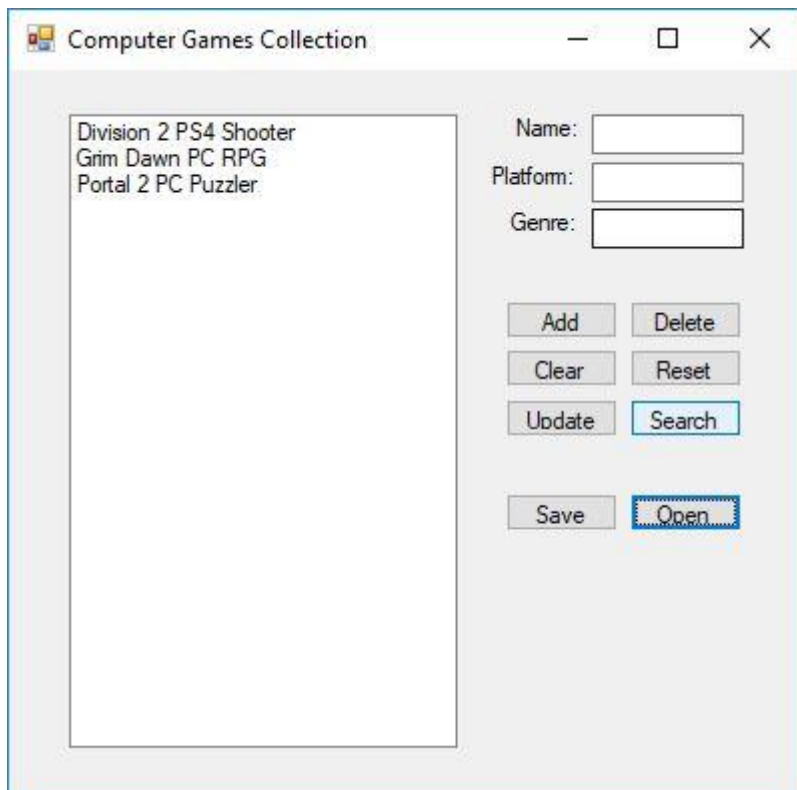
Add Delete

Clear **Reset**

Update Search

Save Open

Screenshot 14



Computer Games Collection

Division 2 PS4 Shooter
Grim Dawn PC RPG
Portal 2 PC Puzzler

Name:

Platform:

Genre:

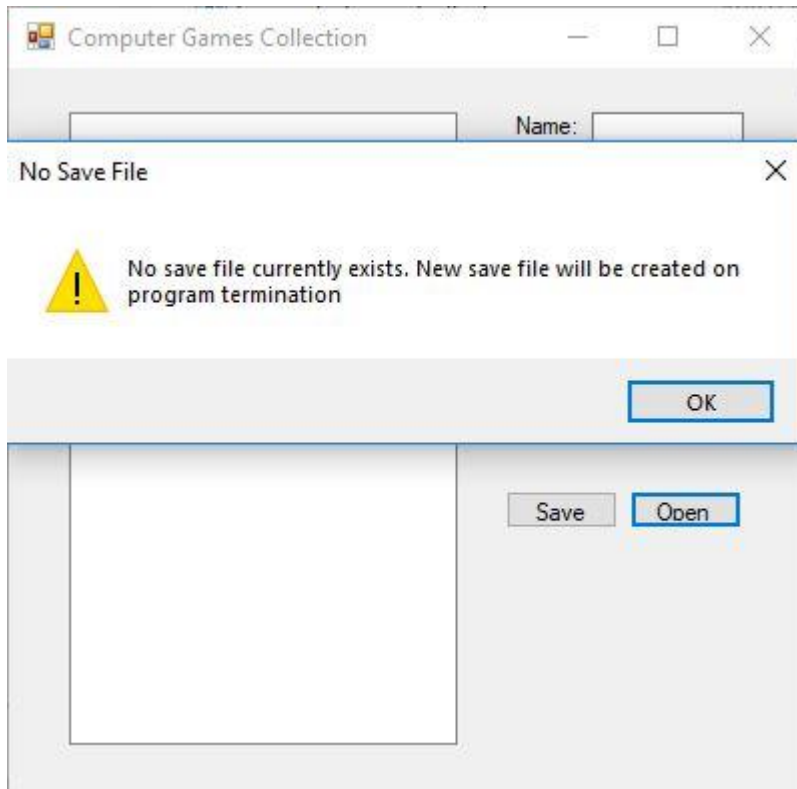
Add Delete

Clear Reset

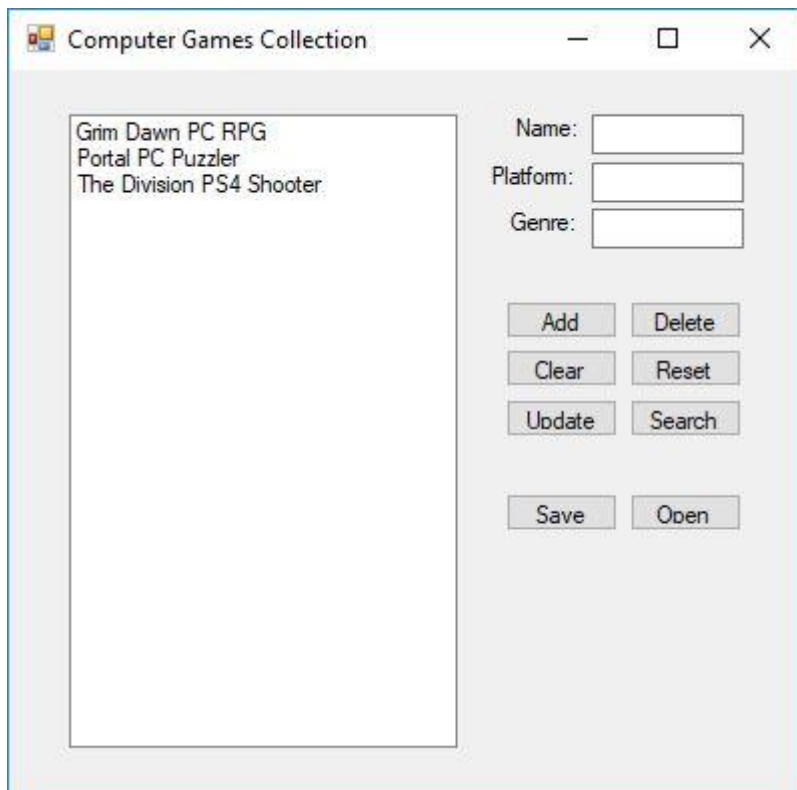
Update **Search**

Save **Open**

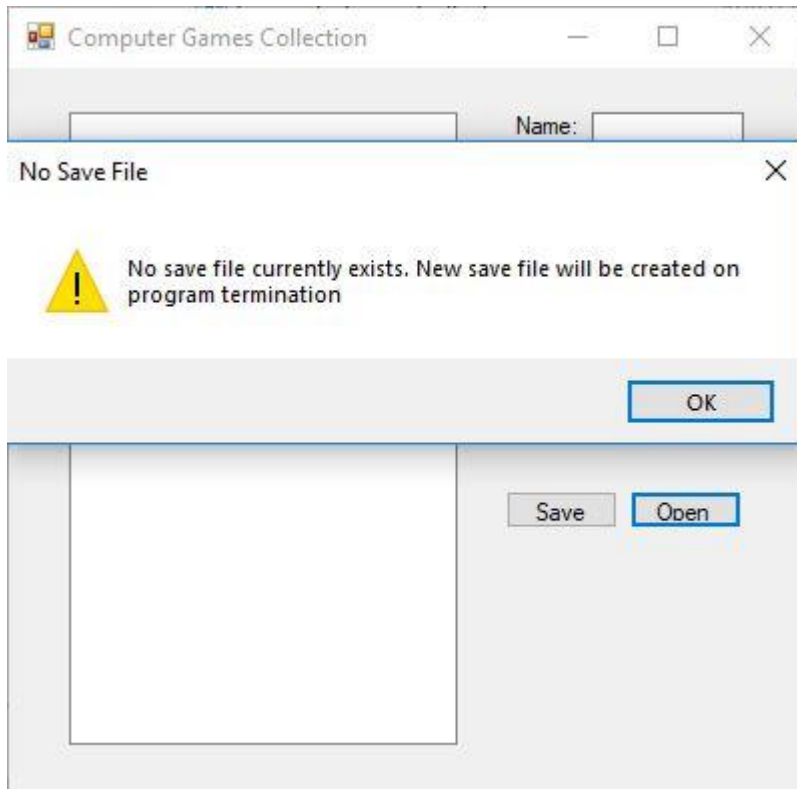
Screenshot 15



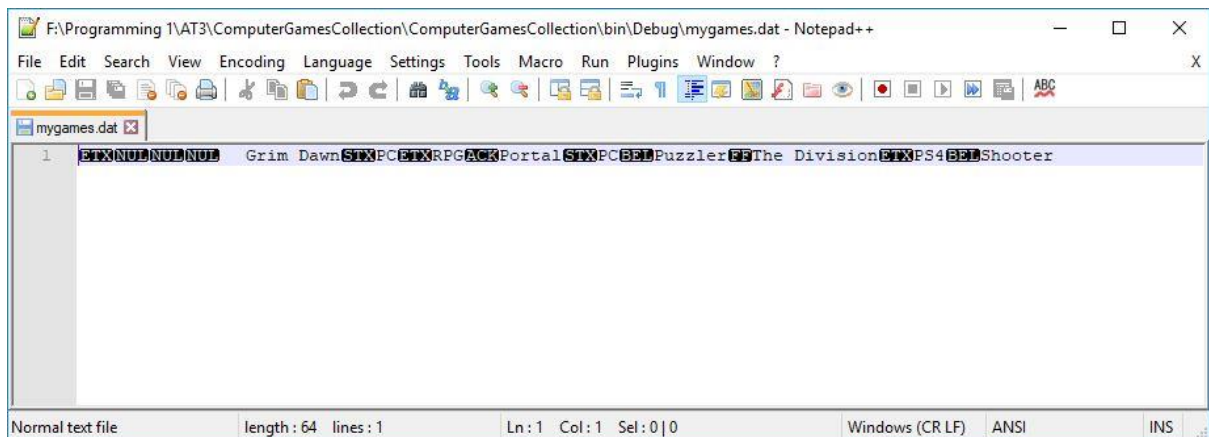
Screenshot 16



Screenshot 17



Screenshot 18



Screenshot 19

Computer Games Collection

Grim Dawn PC RPG
Portal PC Puzzler
The Division PS4 Shooter

Name:

Platform:

Genre:

Enter the genre of the game

Add Delete

Clear Reset

Update Search

Save Open

n