

Tianhao Shi

ACP21ts

COM6516 Object Oriented Programming and Software Design

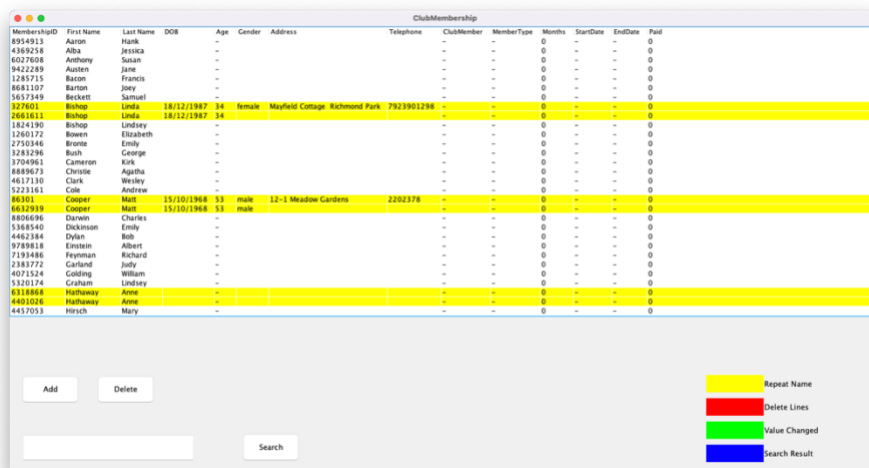
Dec 16th, 2021

### Introduction of ClubMembership

When you launch the ClubMembership first time, you must see this warning window which remind you to fix the information of the customers, because there are several repeated names in the old file.



After clicking the ok button you will see the table with all customers read from csv file.



MembershipID	First Name	Last Name	DOB	Age	Gender	Address	Telephone	ClubMember	MemberType	Months	StartDate	EndDate	Paid
8954913	Aaron	Mark	-	-	-	-	-	-	-	0	-	-	0
4369258	Alba	Jessica	-	-	-	-	-	-	-	0	-	-	0
6027608	Anthony	Sarah	-	-	-	-	-	-	-	0	-	-	0
9422289	Austen	Jane	-	-	-	-	-	-	-	0	-	-	0
1285715	Bacon	Francis	-	-	-	-	-	-	-	0	-	-	0
6681107	Barton	Jerry	-	-	-	-	-	-	-	0	-	-	0
1657349	Beckett	Samuel	-	-	-	-	-	-	-	0	-	-	0
827901	Bishop	Linda	18/12/1987	34	female	Mayfield Cottage Richmond Park	7921901298	-	-	0	-	-	0
2861611	Bishop	Linda	18/12/1987	34	female	Mayfield Cottage Richmond Park	7921901298	-	-	0	-	-	0
1824130	Bishop	Lindsey	-	-	-	-	-	-	-	0	-	-	0
1260172	Bowen	Elizabeth	-	-	-	-	-	-	-	0	-	-	0
2750346	Bronte	Emily	-	-	-	-	-	-	-	0	-	-	0
1285296	Bush	George	-	-	-	-	-	-	-	0	-	-	0
3704961	Cameron	Kirk	-	-	-	-	-	-	-	0	-	-	0
1888673	Christie	Algebra	-	-	-	-	-	-	-	0	-	-	0
4617130	Clark	Wesley	-	-	-	-	-	-	-	0	-	-	0
1222161	Cole	Andrew	-	-	-	-	-	-	-	0	-	-	0
86901	Cooper	Mark	15/10/1968	53	male	12-1 Meadow Gardens	2202378	-	-	0	-	-	0
6652939	Cooper	Mark	15/10/1968	53	male	12-1 Meadow Gardens	2202378	-	-	0	-	-	0
1805696	Darwin	Charles	-	-	-	-	-	-	-	0	-	-	0
1368540	Dickinson	Emily	-	-	-	-	-	-	-	0	-	-	0
1462384	Dylan	Bob	-	-	-	-	-	-	-	0	-	-	0
9789818	Einstein	Albert	-	-	-	-	-	-	-	0	-	-	0
7191486	Feynman	Richard	-	-	-	-	-	-	-	0	-	-	0
2383772	Garland	Judy	-	-	-	-	-	-	-	0	-	-	0
4071524	Golding	William	-	-	-	-	-	-	-	0	-	-	0
1530174	Graham	Lindsey	-	-	-	-	-	-	-	0	-	-	0
6318888	Hathaway	Ann	-	-	-	-	-	-	-	0	-	-	0
1461026	Hathaway	Ann	-	-	-	-	-	-	-	0	-	-	0
4457053	Hersch	Mary	-	-	-	-	-	-	-	0	-	-	0

Take a look at the tips on the bottom-right of the window you can see the meaning of each color, so the lines with yellow color represent the customers with repeated names, you can just delete one of each two of them by clicking the line you want to delete then click the “Delete” button.

There are several columns in this table, let me explain some of them. “Months” means the period of the membership; I take integer as the number of months that the membership will last. “Member Type” shows whether the membership is on or off.

“Paid” shows the money that the customers have paid for the membership.

MembershipID	First Name	Last Name	DOB	Age	Gender	Address	Telephone	ClubMember	MemberType	Months	StartDate	EndDate	Paid
8954913	Aaron	Hank	-	-	-	-	-	-	-	0	-	-	0
4369258	Alba	Jessica	-	-	-	-	-	-	-	0	-	-	0
6027608	Anthony	Susan	-	-	-	-	-	-	-	0	-	-	0
9422289	Austen	Jane	-	-	-	-	-	-	-	0	-	-	0
1285715	Bacon	Francis	-	-	-	-	-	-	-	0	-	-	0
8681107	Barton	Joey	-	-	-	-	-	-	-	0	-	-	0
1657349	Beckett	Samuel	-	-	-	-	-	-	-	0	-	-	0
327601	Bishop	Linda	18/12/1987	34	female	Mayfield Cottage Richmond Park	7921901298	-	-	0	-	-	0
1824190	Bishop	Lindsey	-	-	-	-	-	-	-	0	-	-	0
1260172	Bowen	Elizabeth	-	-	-	-	-	-	-	0	-	-	0
2750346	Brome	Emily	-	-	-	-	-	-	-	0	-	-	0
3283296	Bush	George	-	-	-	-	-	-	-	0	-	-	0
3704961	Cameron	Kirk	-	-	-	-	-	-	-	0	-	-	0
8889673	Chrisse	Agatha	-	-	-	-	-	-	-	0	-	-	0
4617130	Clark	Wesley	-	-	-	-	-	-	-	0	-	-	0
5223161	Cole	Andrew	-	-	-	-	-	-	-	0	-	-	0
86301	Cooper	Matt	15/10/1968	53	male	12-1 Meadow Gardens	2202378	-	-	0	-	-	0
8806696	Darwin	Charles	-	-	-	-	-	-	-	0	-	-	0
5368540	Dickinson	Emily	-	-	-	-	-	-	-	0	-	-	0
4462384	Dylan	Bob	-	-	-	-	-	-	-	0	-	-	0
9789818	Einstein	Albert	-	-	-	-	-	-	-	0	-	-	0
7193486	Feynman	Richard	-	-	-	-	-	-	-	0	-	-	0
2383772	Garland	Judy	-	-	-	-	-	-	-	0	-	-	0
4071524	Golding	William	-	-	-	-	-	-	-	0	-	-	0
5320174	Graham	Lindsey	-	-	-	-	-	-	-	0	-	-	0
4401026	Hathaway	Aime	-	-	-	-	-	-	-	0	-	-	0
4457053	Hirsch	Mary	-	-	-	-	-	-	-	0	-	-	0

When you click the “Delete” button, you will not get the line deleted immediately, the lines you chose will turn red and there is a new button “update” become visible which you can click it to update the table.

MembershipID	First Name	Last Name	DOB	Age	Gender	Address	Telephone	ClubMember	MemberType	Months	StartDate	EndDate	Paid
8954913	Aaron	Hank	-	-	-	-	-	-	-	0	-	-	0
4369258	Alba	Jessica	-	-	-	-	-	-	-	0	-	-	0
6027608	Anthony	Susan	-	-	-	-	-	-	-	0	-	-	0
9422289	Austen	Jane	-	-	-	-	-	-	-	0	-	-	0
1285715	Bacon	Francis	-	-	-	-	-	-	-	0	-	-	0
8681107	Barton	Joey	-	-	-	-	-	-	-	0	-	-	0
1657349	Beckett	Samuel	-	-	-	-	-	-	-	0	-	-	0
327601	Bishop	Linda	18/12/1987	34	female	Mayfield Cottage Richmond Park	7921901298	-	-	0	-	-	0
1824190	Bishop	Lindsey	-	-	-	-	-	-	-	0	-	-	0
1260172	Bowen	Elizabeth	-	-	-	-	-	-	-	0	-	-	0
2750346	Brome	Emily	-	-	-	-	-	-	-	0	-	-	0
3283296	Bush	George	-	-	-	-	-	-	-	0	-	-	0
3704961	Cameron	Kirk	-	-	-	-	-	-	-	0	-	-	0
8889673	Chrisse	Agatha	-	-	-	-	-	-	-	0	-	-	0
4617130	Clark	Wesley	-	-	-	-	-	-	-	0	-	-	0
5223161	Cole	Andrew	-	-	-	-	-	-	-	0	-	-	0
86301	Cooper	Matt	15/10/1968	53	male	12-1 Meadow Gardens	2202378	-	-	0	-	-	0
8806696	Darwin	Charles	-	-	-	-	-	-	-	0	-	-	0
5368540	Dickinson	Emily	-	-	-	-	-	-	-	0	-	-	0
4462384	Dylan	Bob	-	-	-	-	-	-	-	0	-	-	0
9789818	Einstein	Albert	-	-	-	-	-	-	-	0	-	-	0
7193486	Feynman	Richard	-	-	-	-	-	-	-	0	-	-	0
2383772	Garland	Judy	-	-	-	-	-	-	-	0	-	-	0
4071524	Golding	William	-	-	-	-	-	-	-	0	-	-	0
5320174	Graham	Lindsey	-	-	-	-	-	-	-	0	-	-	0
4401026	Hathaway	Aime	-	-	-	-	-	-	-	0	-	-	0
4457053	Hirsch	Mary	-	-	-	-	-	-	-	0	-	-	0

Once you click the update, a new warning shows that it still has repeated names since I just choose 3 lines to delete. After click the “ok” button you can see the new table without the 3 lines chosen before, and there will be two file created locally, one is “next\_update.csv” and another one is the original csv file with the time when you click the update button. Next time when you launch the program, it will load the latest file. And you can also check the history files in this local content.

Go back to the table. You can scroll down to see another 2 groups of repeated names here, if you want keep them, you can change the name if it was previously a typo in the original file. Just double-click the cell you want to make a change, then you can edit it, click the other lines or press Enter key to finish editing.

MembershipID	First Name	Last Name	DOB	Age	Gender	Address	Telephone	ClubMember	MemberType	Months	StartDate	EndDate	Paid
1151025	Marshall	Thomas	-	-	-	-	-	-	-	0	-	-	0
1264509	Mitchell	Joni	-	-	-	-	-	-	-	0	-	-	0
1472890	Montell	Jane	-	-	-	-	-	-	-	0	-	-	0
6563623	Newton	Isaac	-	-	-	-	-	-	-	0	-	-	0
1011318	Orwell	George	-	-	-	-	-	-	-	0	-	-	0
430121	Parkin	Simon	10/05/1980	42	-	Flat 102 Mountain View	-	-	-	0	-	-	0
8398030	Paterson	Isabel	-	-	-	-	-	-	-	0	-	-	0
4980129	Powell	Martha	-	-	-	-	-	-	-	0	-	-	0
3099746	Raskin	Nancy	-	-	-	-	-	-	-	0	-	-	0
5327834	Robinson	Jackie	-	-	-	-	-	-	-	0	-	-	0
3641448	Rudner	Rita	-	-	-	-	-	-	-	0	-	-	0
1271905	Sagan	Carl	-	-	-	-	-	-	-	0	-	-	0
870121	Smith	Anne	02/11/1983	38	female	130 Westside Drive	1142752205	-	-	0	-	-	0
2303231	Snow	Carrie	-	-	-	-	-	-	-	0	-	-	0
5107900	Stone	Larry	-	-	-	-	-	-	-	0	-	-	0
9730185	Tesla	Nikola	-	-	-	-	-	-	-	0	-	-	0
9996485	Twain	Mark	-	-	-	-	-	-	-	0	-	-	0
9399557	Updike	John	-	-	-	-	-	-	-	0	-	-	0
2145821	Viole	Paul	-	-	-	-	-	-	-	0	-	-	0
49822	Watson	Jane	15/08/1995	27	-	-	-	-	-	0	-	-	0
583108	Wesley	George	23/02/1951	71	male	21A Manchester Road	1142684659	-	-	0	-	-	0
880264	Wheeler	Richard	18/02/1961	48	-	-	-	-	-	0	-	-	0
1009415	West	Max	-	-	-	-	-	-	-	0	-	-	0
2198881	Wilde	Oscar	12/12/2010	11	-	-	-	-	-	0	-	-	0
6166134	Washington	Martha	-	-	-	118 Westside	-	-	-	0	-	-	0
8062336	Wright-Phillips	Bradley	19/07/1961	61	-	-	-	-	-	0	-	-	0
8252028	Wright-Phillips	Chazel	15/05/1990	32	-	-	-	-	-	0	-	-	0
7309455	Wright-Phillips	Laura	-	-	-	-	-	-	-	0	-	-	0
6454731	Young	Cy	-	-	-	-	-	-	-	0	-	-	0
8191548	Zappa	Frank	-	-	-	-	-	-	-	0	-	-	0

Add Delete Update

Search

Repeat Name  
Delete Lines  
Value Changed  
Search Result

Like the delete method, change anything will not be applied immediately, you can see the cell turns green when you change anything in the table, once you done, click the “update”.

MembershipID	First Name	Last Name	DOB	Age	Gender	Address	Telephone	ClubMember	MemberType	Months	StartDate	EndDate	Paid
1232900	LoveLace	Richard	-	-	-	-	-	-	-	0	-	-	0
1151025	Marshall	Thomas	-	-	-	-	-	-	-	0	-	-	0
1264509	Mitchell	Joni	-	-	-	-	-	-	-	0	-	-	0
1472890	Montell	Jane	-	-	-	-	-	-	-	0	-	-	0
6563623	Newton	Isaac	-	-	-	-	-	-	-	0	-	-	0
1011318	Orwell	George	-	-	-	-	-	-	-	0	-	-	0
430121	Parkin	Simon	10/05/1980	42	-	Flat 102 Mountain View	-	-	-	0	-	-	0
8398030	Paterson	Isabel	-	-	-	-	-	-	-	0	-	-	0
4980129	Powell	Martha	-	-	-	-	-	-	-	0	-	-	0
3099746	Raskin	Nancy	-	-	-	-	-	-	-	0	-	-	0
5327834	Robinson	Jackie	-	-	-	-	-	-	-	0	-	-	0
3641448	Rudner	Rita	-	-	-	-	-	-	-	0	-	-	0
1271905	Sagan	Carl	-	-	-	-	-	-	-	0	-	-	0
880264	Wheeler	Richard	18/02/1961	48	-	-	-	-	-	0	-	-	0
2303231	Snow	Carrie	-	-	-	-	-	-	-	0	-	-	0
5107900	Stone	Larry	-	-	-	-	-	-	-	0	-	-	0
9730185	Tesla	Nikola	-	-	-	-	-	-	-	0	-	-	0
9996485	Twain	Mark	-	-	-	-	-	-	-	0	-	-	0
9399557	Updike	John	-	-	-	-	-	-	-	0	-	-	0
2145821	Viole	Paul	-	-	-	-	-	-	-	0	-	-	0
49822	Watson	Jane	15/08/1995	27	-	-	-	-	-	0	-	-	0
583108	Wesley	George	23/02/1951	71	male	21A Manchester Road	1142684659	-	-	0	-	-	0
1009415	West	Max	-	-	-	-	-	-	-	0	-	-	0
2198881	Wilde	Oscar	12/12/2010	11	-	-	-	-	-	0	-	-	0
6062336	Wright-Phillips	Bradley	19/07/1961	61	-	118 Westside	-	-	-	0	-	-	0
8252028	Wright-Phillips	Chazel	15/05/1990	32	-	-	-	-	-	0	-	-	0
7309455	Wright-Phillips	Laura	-	-	-	-	-	-	-	0	-	-	0
6454731	Young	Cy	-	-	-	-	-	-	-	0	-	-	0
8191548	Zappa	Frank	-	-	-	-	-	-	-	0	-	-	0

Add Delete

Westside Search

Repeat Name  
Delete Lines  
Value Changed  
Search Result

You will not receive the warning any more since there are no repeated names, and you can use search button after typing something may be included in one or more customers. And the search result will be shown using blue. What’s more, take a look at the date of birth that I set in the previous figure, the age was computed. And the EndDate of the membership and the money customers have paid will also be computed, so these columns are unable to edit, and the same with the membership ID, which is created randomly and non-repeating.

When you want to add a new customer, just click the “Add” button and fill the information in the new window, and this time the First Name, Last Name, and DOB are necessary, or you will see an error window.

**ClubMembership**

MembershipID	First Name	Last Name	DOB	Age	Gender	Address	Telephone	ClubMember	MemberType	Months	StartDate	EndDate	Paid
8954213	Aaron	Hank	-	-	-	-	-	-	-	0	-	-	0
4369258	Alba	Jessica	-	-	-	-	-	-	-	0	-	-	0
6027608	Anthony	Susan	-	-	-	-	-	-	-	0	-	-	0
9422289	Austen	jane	-	-	-	-	-	-	-	0	-	-	0
1285715	Bacon	Francis	-	-	-	-	-	-	-	0	-	-	0
8681107	Rarton	Joey	-	-	-	-	-	-	-	0	-	-	0
5657349	Beckett	Samuel	-	-	-	-	-	-	-	0	-	-	0
327601	Bishop	Linda	18/12/1987	34	female	Mayfield Cottage Richmond Park	7923901298	-	-	0	-	-	0
1824190	Bishop	Lindsey	-	-	-	-	-	-	-	0	-	-	0
1260172	Bowen	Elizabeth	-	-	-	-	-	-	-	0	-	-	0
42750346	Bronze	Emily	-	-	-	-	-	-	-	0	-	-	0
3283296	Bush	George	-	-	-	-	-	-	-	0	-	-	0
3704961	Cameron	Kirk	-	-	-	-	-	-	-	0	-	-	0
8889673	Christie	Agatha	-	-	-	-	-	-	-	0	-	-	0
4617130	Clark	Wesley	-	-	-	-	-	-	-	0	-	-	0
5223161	Cole	Andrew	-	-	-	-	-	-	-	0	-	-	0
862101	Cooper	Matt	15/10/1968	53	male	12-1 Meadow Car	-	-	-	0	-	-	0
8806696	Darwin	Charles	-	-	-	-	-	-	-	0	-	-	0
5368540	Dickinson	Emily	-	-	-	-	-	-	-	0	-	-	0
4462384	Dylan	Bob	-	-	-	-	-	-	-	0	-	-	0
9789818	Einstein	Albert	-	-	-	-	-	-	-	0	-	-	0
7193486	Feynman	Richard	-	-	-	-	-	-	-	0	-	-	0
2383772	Galland	Julry	-	-	-	-	-	-	-	0	-	-	0
4071524	Golding	William	-	-	-	-	-	-	-	0	-	-	0
5320174	Graham	Lindsey	-	-	-	-	-	-	-	0	-	-	0
4401026	Hathaway	Anne	-	-	-	-	-	-	-	0	-	-	0
4457053	Hirsch	Mary	-	-	-	-	-	-	-	0	-	-	0
13541978	Hofstadter	Douglas	-	-	-	-	-	-	-	0	-	-	0
5237565	Iaccoca	Lee	-	-	-	-	-	-	-	0	-	-	0
2372119	James	David	-	-	-	-	-	-	-	0	-	-	0

### Add Member

First Name

Last Name

DOB

Gender

Address

Telephone

### Error

Please Enter All the Information Required!

Repeat Name

Delete Lines

Value Changed

Search Result

You will not be able to set the membership when adding a new customer. Because the table need to be updated before setting a membership. Once you click “Confirm” the table will be updated and you can find the new customer in the bottom of the table.

\_\_\_\_\_

Then you can set the membership as you wish, either “Months” or “StartDate” can be set while the other will be set with the default value: “Months” will be set by “1” and “StartDate” will be set today. And the “MemberType” will be set “I” means individual member if it was set null, and the “MemberState” will be set “Activated” is today is before the end date.

MembershipID	First Name	Last Name	DOB	Age	Gender	Address	Telephone	ClubMember	MemberType	Months	StartDate	EndDate	Paid
8985204	Lennon	John								0			0
2071886	Loveless	Richard								0			0
8360056	Marshall	Thomas								0			0
2903237	Mitchell	Joni								0			0
3570714	Monroe	Jane								0			0
5527321	Newton	Isaac								0			0
5175494	Orwell	George								0			0
4803221	Parkin	Simon	30/05/1980	42		Flat 102 Mountain View				0			0
5610216	Patterson	Isabel								0			0
6979017	Powell	Martha								0			0
5119479	Raskin	Nancy								0			0
9507846	Robinson	Jackie								0			0
6879274	Rudner	Rita								0			0
7158457	Sagan	Carl								0			0
8703221	Smith	Anne	02/11/1983	38	female	130 Westside Drive	1142752205		I	0	12/12/1990	12/01/1991	36
6509992	Snow	Carrie								0			0
8426703	Stone	Larry								0			0
7175261	Tesla	Nikola								0			0
5821206	Twain	Mark								0			0
6076627	Updike	John								0			0
7783905	Viole	Paul								0			0
48822	Watson	George	15/04/1995	27						0			0
589108	Wesley	George	23/02/1991	31	male	21A Manchester Road	1142684659	Activated	I	1	03/12/2021	16/03/2022	108
2434035	Went	Mat								0			0
831969	Wilde	Oscar								0			0
5406675	Washington	Martha								0			0
2341116	Wright-Phillips	Bradley	19/07/1961	61						0			0
8031537	Wright-Phillips	Laura								0			0
8156290	Young	Cy								0			0
5291696	Zappa	Frank								0			0

Buttons: Add, Delete, Search

Legend:

- Repeat Name (Yellow)
- Delete Lines (Red)
- Value Changed (Green)
- Search Result (Blue)

When you try to set membership to a customer which is less than 12 years old with “I” or less than 18 years old with “F”, you will receive the Error page.

MembershipID	First Name	Last Name	DOB	Age	Gender	Address	Telephone	ClubMember	MemberType	Months	StartDate	EndDate	Paid
4289712	Aaron	Hank								0			0
1891967	Alba	Jessica								0			0
7999409	Anthony	Susan	12/12/2010	11						0			0
7347989	Austen	Jane								0			0
4222729	Bacon	Francis								0			0
5669420	Barton	Joey								0			0
8638770	Beckett	Samuel								0			0
327601	Bishop	Linda								0			0
3440739	Bishop	Lindsey								0			0
4575413	Brown	Elizabeth								0			0
5358606	Bronte	Emily								0			0
7464703	Bush	George								0			0
8365861	Cameron	Kirk								0			0
1076893	Christie	Agatha								0			0
1948991	Clark	Wesley								0			0
5360176	Cole	Andrew								0			0
86301	Cooper	Matt	15/10/1968	53	male	12-1 Meadow Gardens	2202378			0			0
5773885	Darwin	Charles								0			0
5256724	Dickinson	Emily								0			0
7519156	Dylan	Bob								0			0
3855925	Einstein	Albert								0			0
5721395	Feynman	Richard								0			0
4872476	Garland	Judy								0			0
1433571	Golding	William								0			0
6847387	Graham	Lindsey								0			0
3584874	Hathaway	Anne								0			0
9983553	Hathawayaaa	Anne								0			0
4949900	Hersch	Mary								0			0
8720165	Hofstadter	Douglas								0			0
9001335	Iacocca	Lee								0			0

Buttons: Add, Delete, Update, Search

Error Message:

Information contains errors! Please check the input!  
Individual member should be at least 12 years old and Family member should be at least 18 years old!  
The MemberType should be set "I" or "F"!

Legend:

- Repeat Name (Yellow)
- Delete Lines (Red)
- Value Changed (Green)
- Search Result (Blue)

That’s all of the functions that ClubMembership has. For more details, you can try to launch the program and explore yourself. Thank you!