1-Contact Book Menu

```
--- Contact Book Menu ---
1. Add Contact
2. Delete Contact
3. Update Contact
4. Find Contact
5. Search by Last Name
6. Search by Classification
7. Display All Contacts
8. Display Favorite Contacts
9. Save Contacts to File
10.Load Contacts from File
11 Reverse Contacts
12. Sort Contacts
0. Exit
Enter your choice: |
```

2-Adding Contact

```
--- Add a New Contact ---
Fn:            yasmine
Ln:            ibrahim
Class(Friend ,work ,family ,other): friend
Set as Fav: (press 1 (fav)or 0 (Not)):1
How many numbers:?!1
Phone #        1:+201212026457
How many mails:?!1
Email #        1:yas12@gmail.com

::Enter Address Details::
Street Number: 1
Street Name:   yy
Town:          yy
State:         yy
Contact added successfully ^---^.
----------------------------------
```
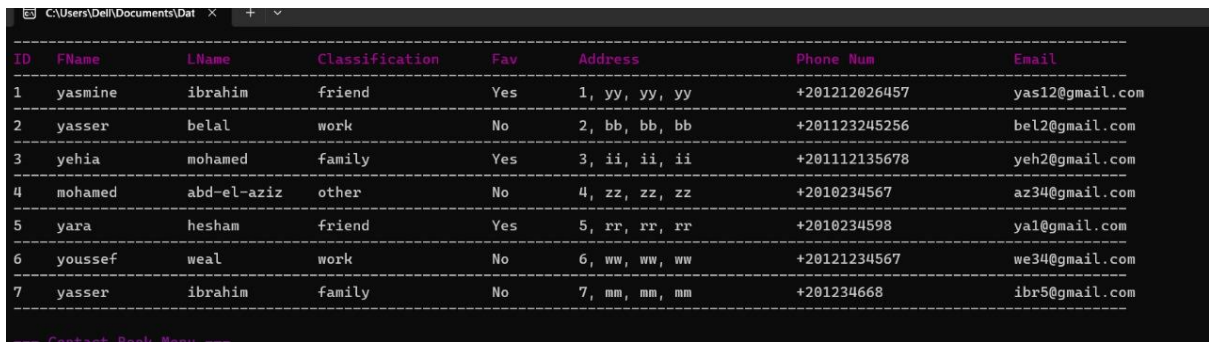
3- handling phone number && email if invalid

```
--- Add a New Contact ---
Fn:            ww
Ln:            ww
Class(Friend ,work ,family ,other): work
Set as Fav: (press 1 (fav)or 0 (Not)):0
How many numbers:?!1
Phone #        1:3456723
Invalid phone number! It must start with +20. Please enter again.
Phone #        1:+20123456
How many mails:?!1
Email #        1:sdwwq
Invalid email address! It must contain '@'. Please enter again.
Email #        1:qww2@gmail.com

::Enter Address Details::
Street Number: |
```
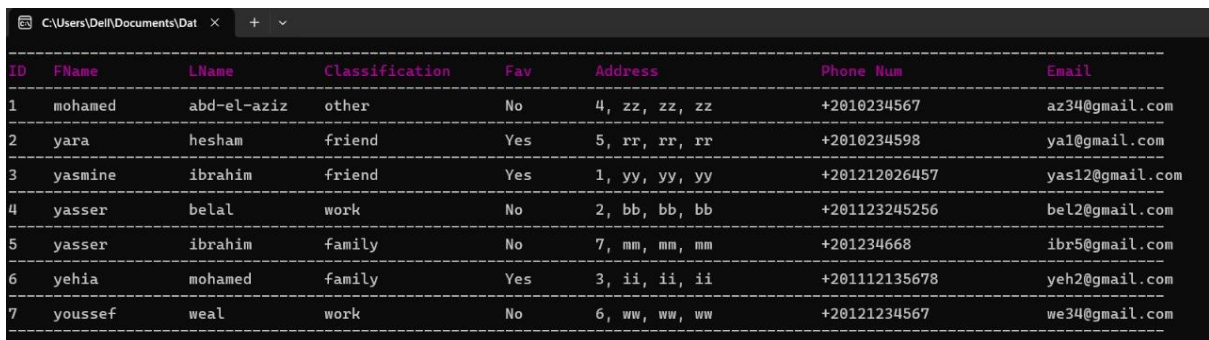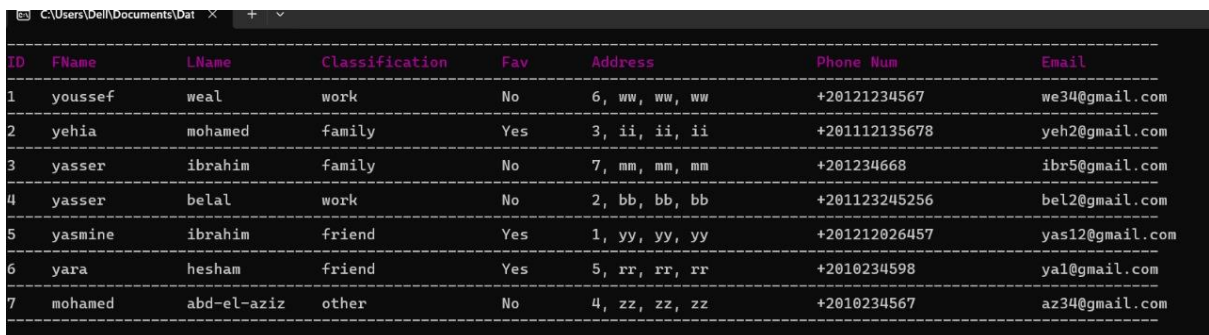
4-Display all contacts

```
C:\Users\Dell\Documents\Dat  ×   +  ∨
----------------------------------------------------------------------------------------------------------------------
ID   FName         LName         Classification   Fav      Address          Phone Num            Email
----------------------------------------------------------------------------------------------------------------------
1    yasmine       ibrahim       friend           Yes      1, yy, yy, yy    +201212026457        yas12@gmail.com
----------------------------------------------------------------------------------------------------------------------
2    yasser        belal         work             No       2, bb, bb, bb    +201123245256        bel2@gmail.com
----------------------------------------------------------------------------------------------------------------------
3    yehia         mohamed       family           Yes      3, ii, ii, ii    +201112135678        yeh2@gmail.com
----------------------------------------------------------------------------------------------------------------------
4    mohamed       abd-el-aziz   other            No       4, zz, zz, zz    +2010234567          az34@gmail.com
----------------------------------------------------------------------------------------------------------------------
5    yara          hesham        friend           Yes      5, rr, rr, rr    +2010234598          ya1@gmail.com
----------------------------------------------------------------------------------------------------------------------
6    youssef       weal          work             No       6, ww, ww, ww    +20121234567         we34@gmail.com
----------------------------------------------------------------------------------------------------------------------
7    yasser        ibrahim       family           No       7, mm, mm, mm    +201234668           ibr5@gmail.com
----------------------------------------------------------------------------------------------------------------------
=== Contact Book Menu ===
```

5-Sort contacts

```
C:\Users\Dell\Documents\Dat  ×   +  ∨
----------------------------------------------------------------------------------------------------------------------
ID   FName         LName         Classification   Fav      Address          Phone Num            Email
----------------------------------------------------------------------------------------------------------------------
1    mohamed       abd-el-aziz   other            No       4, zz, zz, zz    +2010234567          az34@gmail.com
----------------------------------------------------------------------------------------------------------------------
2    yara          hesham        friend           Yes      5, rr, rr, rr    +2010234598          ya1@gmail.com
----------------------------------------------------------------------------------------------------------------------
3    yasmine       ibrahim       friend           Yes      1, yy, yy, yy    +201212026457        yas12@gmail.com
----------------------------------------------------------------------------------------------------------------------
4    yasser        belal         work             No       2, bb, bb, bb    +201123245256        bel2@gmail.com
----------------------------------------------------------------------------------------------------------------------
5    yasser        ibrahim       family           No       7, mm, mm, mm    +201234668           ibr5@gmail.com
----------------------------------------------------------------------------------------------------------------------
6    yehia         mohamed       family           Yes      3, ii, ii, ii    +201112135678        yeh2@gmail.com
----------------------------------------------------------------------------------------------------------------------
7    youssef       weal          work             No       6, ww, ww, ww    +20121234567         we34@gmail.com
----------------------------------------------------------------------------------------------------------------------
```

6-Reverse Contacts

```
C:\Users\Dell\Documents\Dat  ×   +  ∨
----------------------------------------------------------------------------------------------------------------------
ID   FName         LName         Classification   Fav      Address          Phone Num            Email
----------------------------------------------------------------------------------------------------------------------
1    youssef       weal          work             No       6, ww, ww, ww    +20121234567         we34@gmail.com
----------------------------------------------------------------------------------------------------------------------
2    yehia         mohamed       family           Yes      3, ii, ii, ii    +201112135678        yeh2@gmail.com
----------------------------------------------------------------------------------------------------------------------
3    yasser        ibrahim       family           No       7, mm, mm, mm    +201234668           ibr5@gmail.com
----------------------------------------------------------------------------------------------------------------------
4    yasser        belal         work             No       2, bb, bb, bb    +201123245256        bel2@gmail.com
----------------------------------------------------------------------------------------------------------------------
5    yasmine       ibrahim       friend           Yes      1, yy, yy, yy    +201212026457        yas12@gmail.com
----------------------------------------------------------------------------------------------------------------------
6    yara          hesham        friend           Yes      5, rr, rr, rr    +2010234598          ya1@gmail.com
----------------------------------------------------------------------------------------------------------------------
7    mohamed       abd-el-aziz   other            No       4, zz, zz, zz    +2010234567          az34@gmail.com
----------------------------------------------------------------------------------------------------------------------
```

7-Search by last name

```
Enter last name to search: belal
----------------------------------------------------------------------------------------------------------------------
4    yasser        belal         work             No       2, bb, bb, bb    +201123245256        bel2@gmail.com
```

```
Enter last name to search: ibrahim
----------------------------------------------------------------------------------------------------------------------
3    yasser        ibrahim       family           No       7, mm, mm, mm    +201234668           ibr5@gmail.com
----------
5    yasmine       ibrahim       friend           Yes      1, yy, yy, yy    +201212026457        yas12@gmail.com
```

8-Search by Classification

```
Enter classification to search (e.g., Friend, Work, Family): work
----------------------------------------------------------------------------------------------------------------------
1    youssef       weal          work             No       6, ww, ww, ww    +20121234567         we34@gmail.com
----------
4    yasser        belal         work             No       2, bb, bb, bb    +201123245256        bel2@gmail.com
```
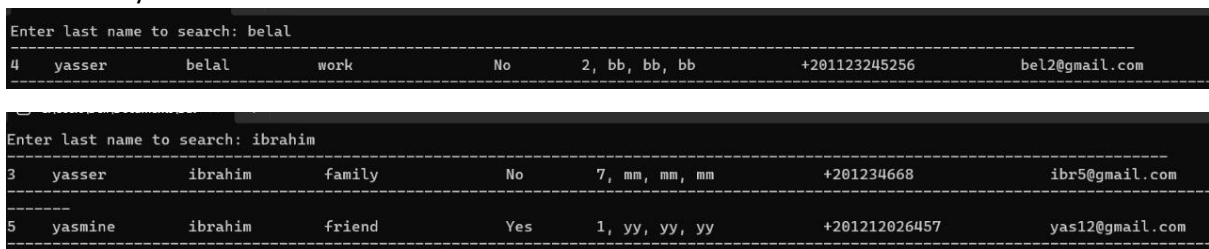
9-Display Favorite Contacts
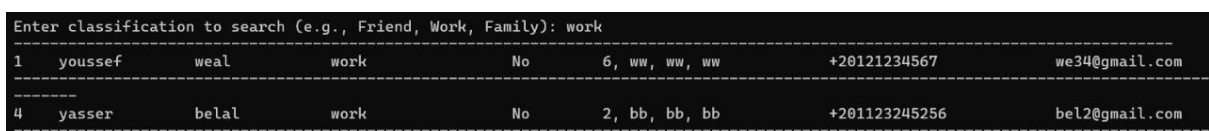
ID	FName	LName	Classification	Fav	Address	Phone Num	Email
2	yehia	mohamed	family	Yes	3, ii, ii, ii	+201112135678	yeh2@gmail.com
5	yasmine	ibrahim	friend	Yes	1, yy, yy, yy	+201212026457	yas12@gmail.com
6	yara	hesham	friend	Yes	5, rr, rr, rr	+2010234598	ya1@gmail.com

10-Update Contact

```
===========================
Enter the first name of the contact to edit: yara
Enter the last name of the contact to edit: hesham
Modify Contact Details:
--- Add a New Contact ---
Fn:             yar
Ln:             hes
Class(Friend ,work ,family ,other): other
Set as Fav: (press 1 (fav)or 0 (Not)):0
How many numbers:?!1
Phone #         1:+2012345678
How many mails:?!1
Email #         1:yy3@gmail.com

::Enter Address Details::
Street Number: 8
Street Name:    vv
Town:           vv
State:          vv
===========================
Contact edited successfully ^---^.
===========================
```

11-Save to file

```
Enter filename to save contacts: data
Contacts saved to file successfully.
```

File   Edit   View

```
yasmine|ibrahim|friend|Yes|1, yy, yy, yy|+201212026457|yas12@gmail.com
yasser|belal|work|No|2, bb, bb, bb|+201123245256|bel12@gmail.com
yehia|mohamed|family|Yes|3, ii, ii, ii|+201112135678|yeh2@gmail.com
mohamed|abd-el-aziz|other|No|4, zz, zz, zz|+2010234567|az34@gmail.com
yara|hesham|friend|Yes|5, rr, rr, rr|+2010234598|ya1@gmail.com
youssef|weal|work|No|6, ww, ww, ww|+20121234598|we34@gmail.com
yasser|ibrahim|family|No|7, mm, mm, mm|+201234668|ibr5@gmail.com
```

12-load from file


```
Enter filename to load contacts: data
Loaded Contact: yasmine ibrahim
Loaded Contact: yasser belal
Loaded Contact: yehia mohamed
Loaded Contact: mohamed abd-el-aziz
Loaded Contact: yara hesham
Loaded Contact: youssef weal
Loaded Contact: yasser ibrahim
Contacts loaded from file successfully.
```

ID	FName	LName	Classification	Fav	Address	Phone Num	Email
1	yasmine	ibrahim	friend	Yes	1, yy, yy, yy	+201212026457	yas12@gmail.com
2	yasser	belal	work	No	2, bb, bb, bb	+201123245256	bel12@gmail.com
3	yehia	mohamed	family	Yes	3, ii, ii, ii	+201112135678	yeh2@gmail.com
4	mohamed	abd-el-aziz	other	No	4, zz, zz, zz	+2010234567	az34@gmail.com
5	yara	hesham	friend	Yes	5, rr, rr, rr	+2010234598	ya1@gmail.com
6	youssef	weal	work	No	6, ww, ww, ww	+20121234598	we34@gmail.com
7	yasser	ibrahim	family	No	7, mm, mm, mm	+201234668	ibr5@gmail.com

13-Delet Contact

ID	FName	LName	Classification	Fav	Address	Phone Num	Email
1	yasmine	ibrahim	friend	Yes	1, yy, yy, yy	+201212026457	yas12@gmail.com
2	yasser	belal	work	No	2, bb, bb, bb	+201123245256	bel12@gmail.com
3	mohamed	abd-el-aziz	other	No	4, zz, zz, zz	+2010234567	az34@gmail.com
4	yara	hesham	friend	Yes	5, rr, rr, rr	+2010234598	ya1@gmail.com
5	youssef	weal	work	No	6, ww, ww, ww	+20121234598	we34@gmail.com
6	yasser	ibrahim	family	No	7, mm, mm, mm	+201234668	ibr5@gmail.com
7	yehia	mohamed	family	Yes	3, ii, ii, ii	+20111213567	yeh2@fgmail.com
8	xx	xx	other	No	11, ff, ff, ff	+201223456	err23@gmail.com

```
Enter the index of the contact to delete: 7
Contact deleted successfully ^---^.
```

ID	FName	LName	Classification	Fav	Address	Phone Num	Email
1	yasmine	ibrahim	friend	Yes	1, yy, yy, yy	+201212026457	yas12@gmail.com
2	yasser	belal	work	No	2, bb, bb, bb	+201123245256	bel12@gmail.com
3	mohamed	abd-el-aziz	other	No	4, zz, zz, zz	+2010234567	az34@gmail.com
4	yara	hesham	friend	Yes	5, rr, rr, rr	+2010234598	ya1@gmail.com
5	youssef	weal	work	No	6, ww, ww, ww	+20121234598	we34@gmail.com
6	yasser	ibrahim	family	No	7, mm, mm, mm	+201234668	ibr5@gmail.com
7	yehia	mohamed	family	Yes	3, ii, ii, ii	+20111213567	yeh2@fgmail.com

14-Exiting

```
Exiting ^...^

Process returned 0 (0x0)   execution time : 37.030 s
Press any key to continue.
```