



# EBAC SOFTWARE

## USER'S MANUAL

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# **1. GENERAL INFORMATION**

General Information section explains in general terms the system and the purpose for which it is intended

## **1.1 System Overview**

EBAC, or Electronic Book of Addresses and Contacts, is a software which records the contact details of a user. The software collects information from the guests, which includes the Name (First, Middle, and Last), City/Province where he/she lives, Zip Code, Gender, Contact Number, and Email Address. Afterwards, it will be saved in a storage file, which can be viewed or edited later on.

## **1.2 Organization of the Manual**

The user's manual consists of three sections: General Information, System Summary, and Using the System.

General Information section explains in general terms the system and the purpose for which it is intended.

System Summary section provides a general overview of the system. The summary outlines the system's requirements, and system's behavior in case of any contingencies.

Using the System section provides a detailed description of system functions.

## **2. SYSTEM SUMMARY**

System Summary section provides a general overview of the system. The summary outlines the system's requirements, and system's behavior in case of any contingencies.

### **2.1 System Requirements**

EBAC Software operates on PC with Linux Ubuntu OS. The recommended system requirements for the software includes: Ubuntu 32 or 64-bit Version 14.0 or higher (Use Ubuntu 18+ for better experience), 1GB+ memory, 50MB+ storage (must be high to accommodate more records and handle system logs), and a decent processor (1.5+ GHz or better). The system must also contain a package called figlet.

Note that the software will still run even though some requirements are not met, but it will affect the performance of the software process.

### **2.2 Contingencies**

In case of power outage, the data that is not saved to the storage file can't be retrieved anymore. On the other hand, the software will automatically create a backup for storage files in the home directory in case of errors or unexpected events.

### 3. USING THE SYSTEM

Using the System section provides a detailed description of system functions.

#### 3.1 Install and Run the Software

First thing to do is to install the software by extracting the contents of the tarball file “ebac.tar.gz” into a directory. From the example (Figure 1), the contents of ebac tarball will be extracted to directory haha.

```
root@unixuser-VirtualBox:~# tar -xvzf ebac.tar.gz -C haha/  
./project/a  
./project/add.bash  
./project/b  
./project/backup.bash  
./project/batch.bash  
./project/c  
./project/contact.txt  
./project/d  
./project/delete.bash  
./project/edit.bash  
./project/flashsrc.bash  
./project/inpcheck.bash  
./project/logs.bash  
./project/logs.txt  
./project/main.bash  
./project/menu.bash  
./project/quit.bash  
./project/search.bash  
./project/sort.bash  
./project/tosort.bash
```

Figure 1. Extracting EBAC Tarball file

Next, go to the file directory where the extracted files are located and then run the “main.bash” script (Figure 2). Make sure to run it as a ROOT user.

```
root@unixuser-VirtualBox:~# cd ./haha/project/  
root@unixuser-VirtualBox:~/haha/project# main.bash
```

Figure 2. Running the Software

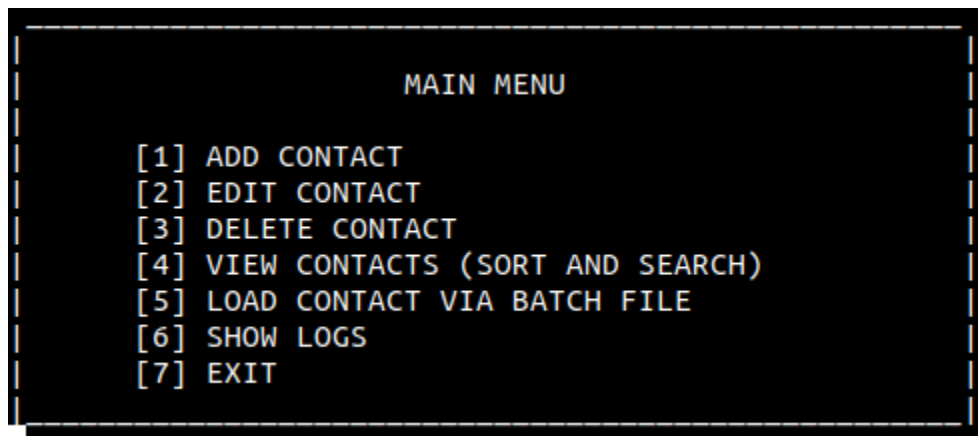
If done correctly, a splash screen will appear, an indication that the software is running properly.



**Figure 3. Software's Splash Screen**

### **3.2 Software Main Menu**

EBAC contains a Main Menu, which consists of 7 different options to choose from (Figure 4). The user can pick from the menu by entering the assigned number he/she wants to select. If the user entered random character, the system will output an error.



**Figure 4. Main Menu**

### 3.2.1 ADD CONTACT

This option is responsible for creating a new contact record and adding it to the existing record. The system will prompt the user to enter necessary information. Inputs' correct formats must be followed (Table 1) or else error will occur (Figure 5).

```
ADD CONTACT
Enter first name(max 2 words):
Enter middle name(max 2 words):
Enter last name(max 2 words):
Enter city/province(max 2 words):
Enter zipcode(####):
Enter gender(M/F):
Enter contact number(09#####):
Enter email address(ex:a@a.ph):
```

Figure 5. Add Contact Option

Inputs	Correct Format	Examples
First, Middle, and Last Names	~Contains alpha characters only (no numeric and special characters) ~Must be limited to 2 words at most ~Non-empty value	~Arryll ~dela Cruz
City/Province	~Contains alpha characters only (no numeric and special characters) ~Must be less than 2 words only ~Non-empty value	~Bulacan ~Manila City
Zip Code	~Strictly contains 4 numeric characters ~Non-empty value	~3024 ~1001
Gender	~Strictly m/M or f/F ~Non-empty value	~M/F ~m/f
Contact Number	~Starts with 09 ~Strictly contains 11 numeric characters ~Non-empty value	~09665331234 ~09216123658
Email Address	~Any alphanumeric word/s proceeded by '@', then the domain name of the email ~Non-empty value	~amna@yahoo.com ~hehe@mapua.edu.ph

Table 1. Inputs' Format List

### 3.2.2 EDIT CONTACT

This option is responsible for changing the information of a specific contact in the records. The system will prompt the user to enter the complete name (First, Middle, and Last Name) of the contact he/she wants to alter (Figure 6).

```
EDIT CONTACT
Enter first name: Arryll Mori
Enter middle name: Natividad
Enter last name: Antolin
```

**Figure 6. Edit Contact Option**

If the name exists within the records, the system will ask again what specific field the user wants to change (Figure 7).

```
Arryll Mori   Natividad   Antolin   SJDM   3023   M   09665331974   a@yahoo.com

| CHOOSE WHAT TO EDIT |
| [1] FIRST NAME      |
| [2] MIDDLE NAME     |
| [3] LAST NAME       |
| [4] CITY/PROVINCE   |
| [5] ZIP CODE        |
| [6] GENDER          |
| [7] CONTACT NUMBER  |
| [8] EMAIL ADDRESS   |
|                     |
```

**Figure 7. Choosing field to edit**

To select, the user must enter the assigned number indicated. Lastly, the user will be asked to enter for the new value of the selected field. Just like in add contact option, the format will also be checked before updating the contact.



### 3.2.3 DELETE CONTACT

This option is responsible for removing or deleting a specific record in the contact list. Just like in the edit contact, the system will prompt the user to enter the complete name (First, Middle, and Last Name) of the contact he/she wants to delete (Figure 8).

```
DELETE CONTACT
Enter first name: Arryll Mori
Enter middle name: Natividad
Enter last name: Antolin
```

Figure 8. Delete Contact Option

If the name exists within the records, the system will show the specific contact and prompt a confirmation message to finalize the deletion process (Figure 9).

```
Arryll Mori Natividad Antolin SJDM 3023 M 09665331974 a@yahoo.com
Delete?(Y/N):
```

Figure 9. Delete Confirmation Message

### 3.2.4 VIEW CONTACTS

This option is responsible for viewing the list of records saved in the file storage. The user can choose 3 different options: to View contacts, Sort contacts, or Search for a specific contact (Figure 10).

```
[1]VIEW
[2]SORT
[3]SEARCH

PRESS ANY TO EXIT
```

Figure 10. View Contacts Option

In View option, the software will show all the saved records within the file storage (Figure 11).

FN	MN	LN	CITY/PROVINCE	ZIP	GENDER	CONTACT NO.	EMAIL
Emwyr	Natividad	Antolin	Bulacan	3023	F	09664331975	eka@gmail.com
Arwyne	Cabanting	Antolin	Bulacan	3023	M	09665334356	aran@gmail.com
Dane	Olegario	Jawod	Taguig city	1630	F	09999999999	dnojawod@gmail.com
Jhon Paul	Escalona	Jaspe	Makati City	1630	M	09536482635	jpj@gmail.com
Jean Marc	Dimaano	Reyes	Mindoro	5200	M	09458725877	jmr@gmail.com
Kristine	Yacat	Coscolluela	Manila	1001	F	09665337845	kyk@yahoo.com
River Arliss	Marasigan	Lontok	Manila City	1000	M	09216578356	raml@yahoo.com
Emie	Natividad	Antolin	Bulacan	3024	F	09153509496	ena@yahoo.com
Rimuru	Slime	Tempest	Forest Jura	1234	F	09876543212	tempest@haha.com
Arryll Mori	Natividad	Antolin	SJDM	3023	M	09665331974	a@yahoo.com

PRESS Q TO RETURN

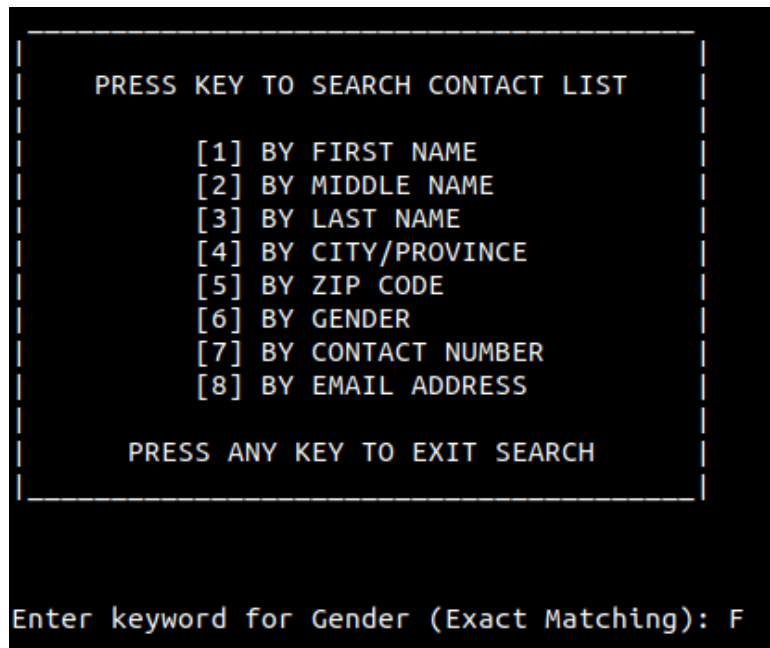
Figure 11. View Option

In Sort option, the user can choose how to display the contacts list. The different fields can be sorted by either descending or ascending. For example below (Figure 12), the first name is arranged in ascending order.

<

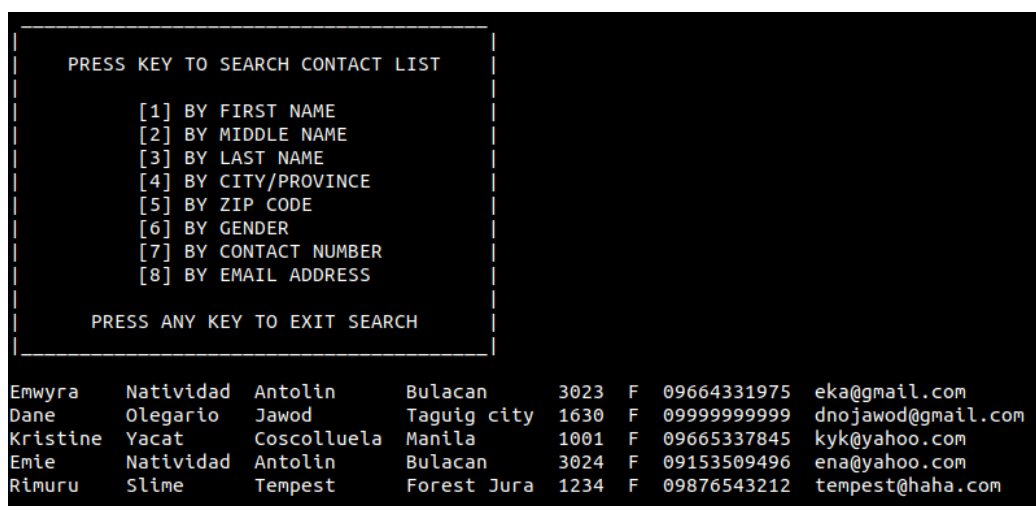
Figure 12. Sort Option

Lastly in Search option, the user can search for a specific user in the record list. He/she can choose what field the search will be based on by selecting the designated number assignment. In the example below (Figure 13), the gender field was selected wherein the user wants to search for all the female contacts.



**Figure 13. Search Option**

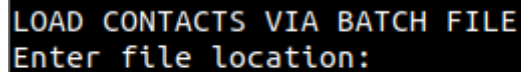
The software will output all the matching results within the contacts (Figure 14), then the user can repeat the search by choosing another field to search on.



**Figure 14. Search Results**

### 3.2.5 LOAD CONTACT VIA BATCH FILE

This option is almost the same as Add Contact, the difference is that the user can add multiple contacts at once by providing a batch file containing the list of contacts to be added to the file storage. First, the system will ask for the file location of the batch file (Figure 15).



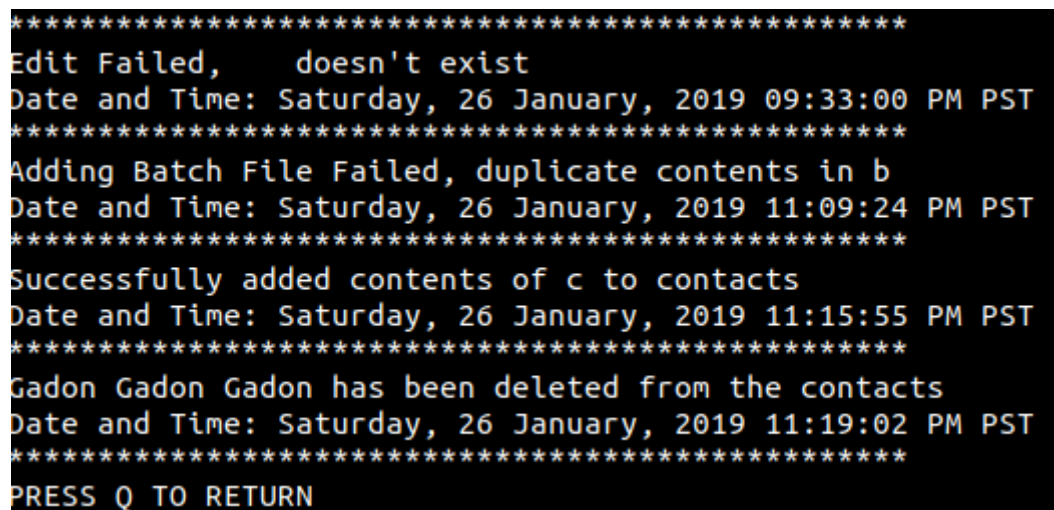
```
LOAD CONTACTS VIA BATCH FILE
Enter file location:
```

**Figure 15. Load Contacts via Batch File Option**

If the inputted file location is existing, the software will check for its format. Then, it will also check for the uniqueness and correctness of the information before adding to the contact list. If the process succeeds, the system will prompt a message.

### 3.2.6 SHOW LOGS

This option is responsible for monitoring the log list for user activities within the software. It includes the success and failure in Adding Contact, Deleting Contact, and Loading Contact via Batch File (Figure 16).



```
*****
Edit Failed,      doesn't exist
Date and Time: Saturday, 26 January, 2019 09:33:00 PM PST
*****
Adding Batch File Failed, duplicate contents in b
Date and Time: Saturday, 26 January, 2019 11:09:24 PM PST
*****
Successfully added contents of c to contacts
Date and Time: Saturday, 26 January, 2019 11:15:55 PM PST
*****
Gadon Gadon Gadon has been deleted from the contacts
Date and Time: Saturday, 26 January, 2019 11:19:02 PM PST
*****
PRESS Q TO RETURN
```

**Figure 16. Show Logs Option**

The table below are the list of possible log messages that can be created by the software (Table 2).

	SUCCESS MESSAGES	FAILURE
<b>ADD CONTACT</b>	"[INPUT] successfully added to the contacts"	"Adding Failed, [INPUT] already exist"
<b>EDIT CONTACT</b>	"Successfully edited the [FIELD] of contact [NAME]"	"Edit Failed, [INPUT] doesn't exist"
		"Edit Failed, Invalid menu choice"
		"Edit Failed, Invalid input values"
<b>DELETE CONTACT</b>	"[INPUT] has been deleted from the contacts"	"Deletion failed, [INPUT] doesn't exist"
<b>BATCH FILE</b>	"Successfully added contents of [INPUT] to contacts"	"Adding Batch File Failed, invalid format"
		"Adding Batch File Failed, duplicate contents in [INPUT]"
		"Adding Batch File Failed, invalid input values"

**Table 2. Log Messages List**

### 3.2.7 EXIT

This option will close the software. A splash screen will be displayed before exiting the system (Figure 17).



**Figure 17. Software's Exit Splash Screen**

### 3.3 Error Messages and How to Deal with it

EBAC produce a handful of error prompts, mostly in input checking, to assure the correctness of the information to be saved in the file storage. Other errors are produced due to the invalid inputs for choices and some other related stuffs. If happens that you encountered some pesky errors, just follow the tips below.

#### 3.3.1 Main Menu

Main Menu produces only one error:

```
Invalid choice, try again
```

From the sentence itself, it means that you've entered invalid input for the menu selection, aside from 0-7. Just simply try another input and check if it is within 0-7 range.

#### 3.3.2 Input and Error Checking for Add, Delete and Edit Contact

Input checking is necessary to check for the user inputs related to assure the correctness of the data, as said a while ago. If you encountered error:

```
>Invalid first name  
>Invalid middle name  
>Invalid last name  
>Invalid city/province  
>Invalid zip code format  
>Invalid gender  
>Invalid contact number  
PLEASE CHECK INPUT AND TRY AGAIN
```

It means that you didn't follow the correct input format. Please see the Table 1 for format details and try again with another input.

Another error that you might encounter in Add Contact option is:

```
Name already exist in the contacts
```

In this case, another record from the contacts have the same first, middle, and last name to the ones you've inputted. There are two ways to avoid this, first is by creating new contact with different name or you can delete the old record and replace it.

In Edit Contact option, there are two errors that might be run into:

```
Name doesn't exist!
```

```
Invalid choice
```

The first one is also an error in Delete Contact option. It will happen if the inputted first, middle, and last name is not present in the file storage. To solve this, try first to view the list of contacts and then enter the name again, you might have mistyped the name or something.

In the second one, it is like the error in the main menu. You've entered an invalid input for the selection. Choose only 1-8 for the field selection in Edit Contact option.

### 3.3.3 Batch File Error and Input Checking

In loading contacts via batch file, the possible errors are:

```
z doesn't exists
```

```
Invalid format
```

```
d contains invalid input values
```

```
Content/s of b already exist in contacts
```

The first error happens if the inputted file location is not located by the system. Please check for the correct location and try again.

In the second one, the batch file was found but it turns out that the format is wrong. Make sure that the fields are separated by a colon.

In the next one, the batch file was also found and in correct format. The problem is one or more data are in the wrong format. For example, the zip code contains a special character or something like that. Please compare the batch file data to the correct input format in Table 1 and try again.

The last error would likely to happen if you want to add a contact which is already existing in the file storage, just like in the previous errors. To get rid of it, check again the batch file and also view the contacts to compare both.

## 3.4 EBAC Files and its Functionalities

On this section, the files from extracted tarball will be explained in detailed manner including the functionalities of each script.

a	<b>backup.bash</b>	contact.txt	<b>edit.bash</b>	<b>logs.bash</b>	<b>menu.bash</b>	<b>sort.bash</b>
<b>add.bash</b>	<b>batch.bash</b>	d	<b>flashsrc.bash</b>	logs.txt	<b>quit.bash</b>	<b>tosort.bash</b>
b	c	<b>delete.bash</b>	<b>inpcheck.bash</b>	<b>main.bash</b>	<b>search.bash</b>	

### 3.4.1 Main Scripts

**add.bash** = responsible for add contact functionality

**edit.bash** = responsible for edit contact functionality

**batch.bash** = responsible for loading contacts via batch file functionality

**logs.bash** = responsible for view logs functionality

**sort.bash** = responsible for sorting capability in view contacts

**search.bash** = responsible for searching capability in view contacts

**main.bash** = main script file for EBAC software.



### 3.4.2 Helper Scripts

**backup.bash** = creates a backup file for both logs.txt and contact.txt in home directory

**flashsrc.bash** = creates the splash screen effect in the software

**inpcheck.bash** = contains the input checker function for add, edit, delete, and load contacts via batch file functionalities.

**menu.bash** = creates user-interface for main menu

**quit.bash** = contains one-key quit function to avoid repeated codes within other scripts

**tosort.bash** = contains helper function for sort.bash

### 3.4.3 Other Files

**a, b, c, d** = benchmarking purposes for batch file loading

**contact.txt** = serves as file storage and contains contact information

**logs.txt** = contains activity logs list of the user