


Assignment Case	
CH4	
Periode Berlaku Semester Ganjil 2022/2023 Valid on Odd Year 2022/2023	Software Laboratory Center Assistant Recruitment 23-1

Note: Please focus on the main logic and main feature!
(Splash screen and design are not scored)

Soal

Case

VeleThone Book

VeleThone Book is a company that provides **digital telephone book service**. They are in need of a program that can **read and process their datas**. You are asked to make the program for this company. **The program has the following requirements.**

➤ Home Menu

- This menu contains of 4 menus, which are:
 - Add telephone book**
 - Search telephone book**
 - View telephone book**
 - Exit.**
- Ask user to input **which menu they want to open. Validate** the input must **between 1 and 4 inclusively**.

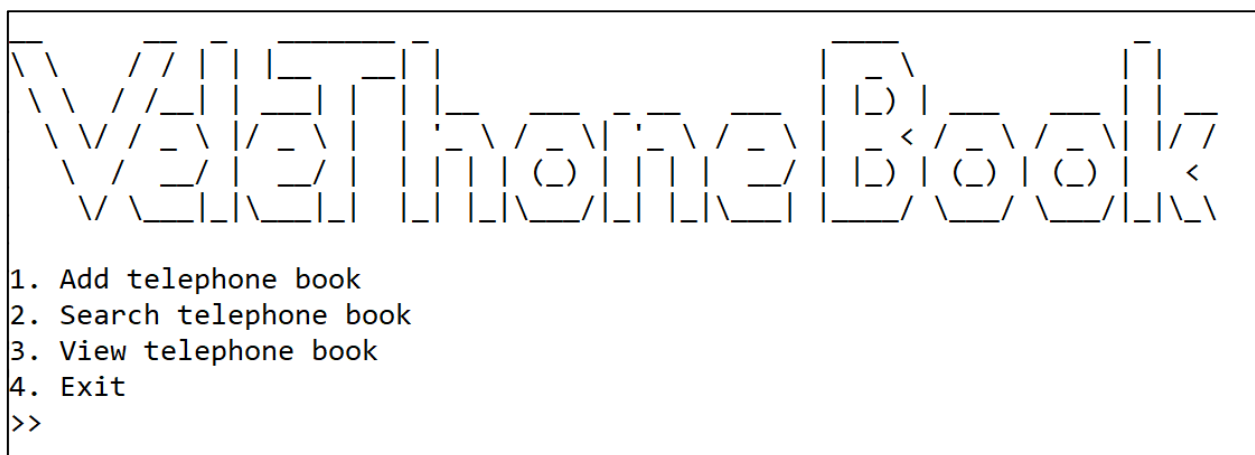


Figure 1. Home Page

1. If user chooses **Add telephone book**, then:
 - Ask the user to **input a name**. Validate that **the name must at least be 3 characters long**.
 - **Then** ask the user to input a **phone number**. Validate that the phone number must be **10 to 12 characters long, consisting of only numbers, and starts with '0'**.
 - Lastly, ask the user to input an address. Validate that the **address must end with 'Street'**.

```
--Add telephone book--

Please Input Name [Must be more than 3 characters long]:
Name must be at least 3 characters long!

Please Input Name [Must be more than 3 characters long]: Budi

Please Input Phone Number [10..12 characters long, must start with '0', must be a number]: 12345678
Phone number must be between 10 to 12 characters long!

Please Input Phone Number [10..12 characters long, must start with '0', must be a number]: 123456789012
Phone number must start with '0'

Please Input Phone Number [10..12 characters long, must start with '0', must be a number]: 0123456789012
Phone number must consists of only numbers

Please Input Phone Number [10..12 characters long, must start with '0', must be a number]: 081234567890

Please Input Address [Must end with street]: Jalan Anggrek
Address must end with 'Street'

Please Input Address [Must end with street]: Anggrek Street

Phone data added successfully!
Press enter to continue...
```

Figure 2. Add telephone book menu

- If all validations are fulfilled, then write the data as a new line in 'file.txt' with the following format: [Name]#[PhoneNumber]#[Address].
2. If user chooses **Search telephone book**, then:
 - Ask the user to input a **name to be searched** in the telephone book.

```
--Search telephone book--

Input name to search data:
```

Figure 3. Search telephone book menu

- Then, **search the inputted name from the file** with **binary search algorithm (case sensitive)**.
- If there are **no data with the inputted name**, show a message **“No data found!”**.

```
No data found!

Press enter to continue...
```

Figure 4. If there are no data found

- Otherwise, show the **name, phone number, and, address** of the searched name.

```
Name: Budi
Phone Number: 0812345567
Address: Anggrek Street

Press enter to continue...
```

Figure 5. The data of the searched user

3. If user chooses View **telephone book**, then:
 - Ask the user **how to view the telephone book**. **Validate** that the input must be **“ASC”** or **“DESC”**.

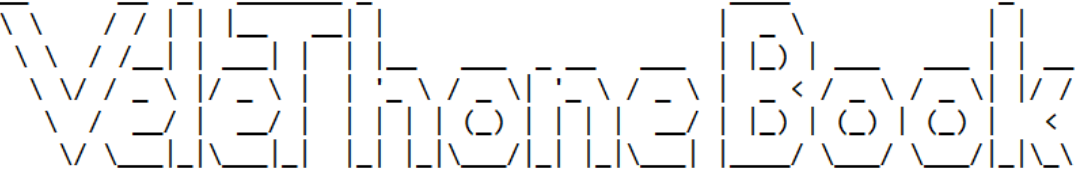
```
--View telephone book--

How would you like to view telephone book ? [ASC | DESC]: asc
Input must be 'ASC' or 'DESC'

How would you like to view telephone book ? [ASC | DESC]: █
```

Figure 6. View telephone book menu

- If the user inputs **“ASC”**, sort the data using **bubble sort algorithm ascendingly**, and **show contacts** in telephone book.

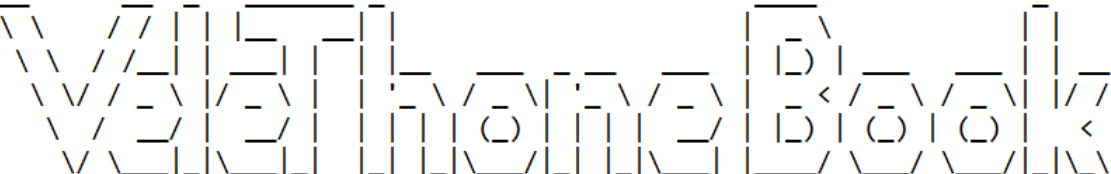


No.	Name.	Phone Number	Address
1	A	08127481267	A Street
2	B	08216471627	B Street
3	Budi	0812345678	Anggrek Street
4	C	08216471627	C Street
5	D	08492839471	D Street

Press enter to continue...

Figure 7. Data sorted ascendingly

- If the user inputs **“DESC”**, sort the data using **bubble sort algorithm descendingly**, and show them.



No.	Name.	Phone Number	Address
1	D	08492839471	D Street
2	C	08216471627	C Street
3	Budi	0812345678	Anggrek Street
4	B	08216471627	B Street
5	A	08127481267	A Street

Press enter to continue...

Figure 8. Data sorted descending

4. If user chooses **Exit**, then:
 - **Display an end screen, and program will stop.**

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```

Through courage and perseverance, we shape and define our future
Bluejacket 22-1

Figure 9. End Screen

Please run the EXE file to see the sample program.