

## Testing Procedures

### 1. Manual Testing - Menu Option Choices

A manual test was done on the process of choosing menu options prompted by a custom programmed Terminal Menu. These tests give an indication of the functionality success of the custom menus.

The main menu of the application is as follows:

```
Welcome to Snooze It!

Please Choose From the Following Options:

(Use the Up & Down Navigation keys to Navigate The Menu.)

(Press <Enter> to Select an Option)

> Enter A New Sleep Log
  View Previous Single Night Sleep Log
  View Previous 1 Week Sleep Log
  End Application
```

When “Enter A New Sleep Log” was chosen, the window outputs the following instructions and prompts the user to begin entering their details.

```
Welcome to Snooze It!

Please Choose From the Following Options:

(Use the Up & Down Navigation keys to Navigate The Menu.)

(Press <Enter> to Select an Option)

You have chosen to enter a new sleep log
Please enter the year of the log (YYYY): █
```

When user selects the second option “View Previous Single Night Sleep Log” the terminal window shows the following prompt:

```
Welcome to Snooze It!

Please Choose From the Following Options:

(Use the Up & Down Navigation keys to Navigate The Menu.)

(Press <Enter> to Select an Option)

  Enter A New Sleep Log
> View Previous Single Night Sleep Log
  View Previous 1 Week Sleep Log
  End Application
```

```
Please Choose From the Following Options:
```

```
(Use the Up & Down Navigation keys to Navigate The Menu.)
```

```
(Press <Enter> to Select an Option)
```

```
You have chosen to view a previous sleep log
```

```
Please enter the date of the log (YYYY-MM-DD), then press <Enter>:
```

When user selects the third option “View Previous 1 Week Log”, the following prompt is displayed:

```
Welcome to Snooze It!
```

```
Please Choose From the Following Options:
```

```
(Use the Up & Down Navigation keys to Navigate The Menu.)
```

```
(Press <Enter> to Select an Option)
```

```
Enter A New Sleep Log
```

```
View Previous Single Night Sleep Log
```

```
> View Previous 1 Week Sleep Log
```

```
End Application
```

```
Please Choose From the Following Options:  
  
(Use the Up & Down Navigation keys to Navigate The Menu.)  
  
(Press <Enter> to Select an Option)  
  
You have chosen to view a week period of sleep logs  
Please enter a date to backtrack from in (YYYY-MM-DD), then press <Enter> :
```

When user selects the last option “End Application”, the following prompt is shown:

```
Welcome to Snooze It!  
  
Please Choose From the Following Options:  
  
(Use the Up & Down Navigation keys to Navigate The Menu.)  
  
(Press <Enter> to Select an Option)  
  
    Enter A New Sleep Log  
    View Previous Single Night Sleep Log  
    View Previous 1 Week Sleep Log  
> End Application
```

Please Choose From the Following Options:

(Use the Up & Down Navigation keys to Navigate The Menu.)

(Press <Enter> to Select an Option)

You have chosen to End Application

Thank you for using Snooze It! Please come back again soon!

## 2. Manual Testing - User Input

A manual test was done on the process of providing user information to the application.

Multiple incorrect user inputs were fed into the application to manually test whether each error was handled by the application well or not.

### Entering User Input

#### Incorrect Year Inputs

When users enter incorrect inputs, the following prompts are shown:

```
Please enter the year of the log (YYYY): ****  
<class 'ValueError'>  
An invalid character(s) has been entered. Please enter numbers only
```

```
Please enter the year of the log (YYYY): 1234  
<class 'unique_exceptions.InvalidYearError'>  
An invalid entry has been made. Please enter a number within 2023 and the current year
```

```
Please enter the year of the log (YYYY): 9999  
<class 'unique_exceptions.InvalidYearError'>  
An invalid entry has been made. Please enter a number within 2023 and the current year
```

Please enter the year of the log (YYYY): ABCD

<class 'ValueError'>

An invalid character(s) has been entered. Please enter numbers only

Please enter the year of the log (YYYY): ABCDEFGHIJK

<class 'ValueError'>

An invalid character(s) has been entered. Please enter numbers only

Please enter the year of the log (YYYY): 1234567890

<class 'unique\_exceptions.InvalidYearError'>

An invalid entry has been made. Please enter a number within 2023 and the current year

## Incorrect Month Inputs

When users enter incorrect month inputs, the following prompts are shown on their terminal window:

```
Please enter the month of the log (M / MM): 8  
<class 'unique_exceptions.InvalidMonthError'>  
Month entry must not exceed the current month of year. Please enter a valid month.
```

```
Please enter the month of the log (M / MM): *  
<class 'ValueError'>  
An invalid character(s) has been entered. Please enter numbers only
```

```
Please enter the month of the log (M / MM): 88  
<class 'unique_exceptions.InvalidMonthError'>  
Month entry must not exceed the current month of year. Please enter a valid month.
```

```
Please enter the month of the log (M / MM): -1  
<class 'unique_exceptions.RangeError'>  
Entries must be within normal calendar format
```



## Incorrect Date Inputs

When users enter incorrect day inputs, the following prompts are shown on their terminal window:

```
Please enter the date of the log (D / DD): -1
<class 'unique_exceptions.RangeError'>
Entries must be within normal calendar format
```

```
Please enter the date of the log (D / DD): 123
<class 'unique_exceptions.InvalidDateError'>
Date entry must not exceed the current date of the calendar year. Please re-enter a valid date.
```

```
Please enter the date of the log (D / DD): &&
<class 'ValueError'>
An invalid character(s) has been entered. Please enter numbers only
```

```
Please enter the date of the log (D / DD): 29
<class 'unique_exceptions.InvalidDateError'>
Date entry must not exceed the current date of the calendar year. Please re-enter a valid date.
```

## Incorrect Hour Inputs

When users enter incorrect hour input, the following prompts are shown on their terminal window:

```
How many hours did you sleep? (Press <Enter> to continue): -1
<class 'unique_exceptions.NegativeError'>
Please do not enter a negative number.
```

```
How many hours did you sleep? (Press <Enter> to continue): 100
<class 'unique_exceptions.SleepTimeError'>
Are you a rare species of a bear? Please enter a sensible number of hours slept.
```

```
How many hours did you sleep? (Press <Enter> to continue): &&
<class 'ValueError'>
An invalid character(s) has been entered. Please enter numbers only.
```

### Incorrect Quality of Sleep Rating Input

When users enter incorrect quality of sleep input, the following prompts are shown on their terminal window:

```
On a scale of 0 (No Sleep) to 10 (Excellent), how would you rate your sleep?  
(Press <Enter> to continue):
```

```
**
```

```
<class 'ValueError'>
```

```
An invalid character(s) has been entered. Please enter numbers only
```

```
On a scale of 0 (No Sleep) to 10 (Excellent), how would you rate your sleep?  
(Press <Enter> to continue):
```

```
15
```

```
<class 'unique_exceptions.NumberInputError'>
```

```
You have entered an invalid character. Please enter a number from 1 to 10.
```

```
On a scale of 0 (No Sleep) to 10 (Excellent), how would you rate your sleep?  
(Press <Enter> to continue):
```

```
-1
```

```
<class 'unique_exceptions.NegativeError'>
```

```
Please do not enter a negative number.
```

### Incorrect Caffeine Intake Input

When users enter incorrect caffeine intake input, the following prompts are shown on their terminal window:

```
Did you have any coffee in the afternoon/evening?  
(Enter (Y/N) & press <Enter> to continue):  
H  
<class 'unique_exceptions.InvalidInputError'>  
You have entered an invalid character. Please type either 'Y' or 'N'.
```

```
Did you have any coffee in the afternoon/evening?  
(Enter (Y/N) & press <Enter> to continue):  
*  
<class 'unique_exceptions.InvalidInputError'>  
You have entered an invalid character. Please type either 'Y' or 'N'.
```

```
Did you have any coffee in the afternoon/evening?  
(Enter (Y/N) & press <Enter> to continue):  
1  
<class 'unique_exceptions.InvalidInputError'>  
You have entered an invalid character. Please type either 'Y' or 'N'.
```

## Incorrect Journal Entry Input

When users enter incorrect journal prompt input, the following messages are shown on their terminal window:

```
Would you like to enter a sleep journal?  
(Enter (Y/N) & press <Enter> to continue):  
1  
<class 'unique_exceptions.InvalidInputError'>  
You have entered an invalid character. Please type either 'Y' or 'N'.
```

```
Would you like to enter a sleep journal?  
(Enter (Y/N) & press <Enter> to continue):  
H  
<class 'unique_exceptions.InvalidInputError'>  
You have entered an invalid character. Please type either 'Y' or 'N'.
```

```
Would you like to enter a sleep journal?  
(Enter (Y/N) & press <Enter> to continue):  
*  
<class 'unique_exceptions.InvalidInputError'>  
You have entered an invalid character. Please type either 'Y' or 'N'.
```

## Manual Testing - Single Sleep Log Search

Users can search up their sleep logs in the application. The following incorrect inputs indicate the graceful responses given by the application

When users input the wrong input formats, they receive the following messages:

```
Please enter the date of the log (YYYY-MM-DD), then press <Enter>: 2023-**-66  
Incorrect Date Format Entered. Please enter a date format within (YYYY-MM-DD) using numbers separated by '-' only.
```

```
You have chosen to view a previous sleep log  
Please enter the date of the log (YYYY-MM-DD), then press <Enter>: 2023/05/23  
Incorrect Date Format Entered. Please enter a date format within (YYYY-MM-DD) using numbers separated by '-' only.
```

```
You have chosen to view a previous sleep log  
Please enter the date of the log (YYYY-MM-DD), then press <Enter>: 1111-22-33  
Incorrect Date Format Entered. Please enter a date format within (YYYY-MM-DD) using numbers separated by '-' only.
```

If a correct date format is given, but the date is unavailable in the csv file, the user will receive the following message:

```
Please enter the date of the log (YYYY-MM-DD), then press <Enter>: 2023-05-14  
<class 'unique_exceptions.EmptyDataError'>  
DataFrame search returned empty. Please enter a search date that is available in our records.
```

### Manual Testing - 7 Days Sleep Log Search

Users can search up their sleep logs in the application up to 7 days of the start date they provide. The following incorrect inputs indicate the graceful responses given by the application.

```
Please enter a date to backtrack from in (YYYY-MM-DD), then press <Enter> : 2023-**-**  
<class 'ValueError'>  
Incorrect Date Format Entered. Please enter a date format within (YYYY-MM-DD) using numbers separated by '-' only.
```

```
Please enter a date to backtrack from in (YYYY-MM-DD), then press <Enter> : 1234-56-78  
<class 'ValueError'>  
Incorrect Date Format Entered. Please enter a date format within (YYYY-MM-DD) using numbers separated by '-' only.
```

```
Please enter a date to backtrack from in (YYYY-MM-DD), then press <Enter> : !@#$-%^-&*  
<class 'ValueError'>  
Incorrect Date Format Entered. Please enter a date format within (YYYY-MM-DD) using numbers separated by '-' only.
```

Providing the correct date but date contains no stored information of user inputs, gives this message in the terminal window:

```
Please enter a date to backtrack from in (YYYY-MM-DD), then press <Enter> : 2023-04-25  
<class 'unique_exceptions.EmptyDataError'>  
DataFrame search returned empty. Please enter a search date that is available in our records.
```