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| **UCSI COLLEGE** |
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| **ACADEMIC YEAR 2023/2024** |

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**Subject** **:** Introduction to Programming

**Semester** **:** May 2023

**Programme** **:** Diploma in Information Technology, Diploma in Information System ,UK Degree Transfer Program

**ASSIGNMENT COVER PAGE**

Course Details

Subject Code : DIT 2194

Subject Title : **Introduction to Programming**

Trimester                    : May 2023

Title of assignment     : My First Java Application

Lecturer’s Name :  Nadiah Binti Zainal Abidin

*Important Note* *: Submission of assignments is the responsibility of the students.*

***Failure to reference may result in a zero mark***

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Lifestyle Management Application  
**Introduction**

“LMAO” also known as Lifestyle Management Application is a tool and utilities app that aid users in their busy lives. “LMAO” provide a wide range of features that may help users stay organized, productive, and ahead of schedule.

The most promising feature in “LMAO” would be the To-Do List, as it is the bread and butter of “LMAO”. This feature allow user to create and manage list of items such as tasks, due dates, anniversary, and their priorities. To-Do List is made to allow user customization to fit the user’s individual needs, while also allowing user to access it anywhere at any time.

Besides that, “LMAO” also provide other features such as Day Prediction which allow user to input a day and the number of days after that said day, and “LMAO” will accurately determine what day it will be. For example, if a user input Sunday and 6 days. “LMAO” will determine that the day after 6 days will be Saturday.

Other than that, “LMAO” also offer a simple yet uncommon feature in lifestyle application called “Converter”. “Converter” provide user the ability to calculate BMI, converts units of length and height, and act as a metric converter. This feature is easy to use and provide valuable addition to “LMAO” as it helps user to stay organized and informed.

As time goes on, “LMAO” will keep improving and upgrading itself through updates and patches. “LMAO” will be able to adapt to new environment as new technology comes out. In short, we plan to continuously support and update “LMAO” by gathering user’s review, option and complains.

As time goes on, “LMAO” will keep improving and evolve as we are committed to continuously provides update regularly with new features and bug fixes. We believe the best way to improve a lifestyle application is by listening to our users. In the future, “LMAO” will have a feature that allow user to input their review, opinion, and complaints, however this feature is still a work in progress and will be release in patch 1.3.

**Application Background**

Lifestyle applications are not exactly new or unique. They have been done numerous times, but they were always boring and mediocre. Through many research and considerations, we decided to create a lifestyle application that is simple yet effective and can continuously improve and evolve. Thus, the idea of “LMAO” or also known as Lifestyle Management Application, was born.

Lifestyle Management Application

**Flowchart**

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Lifestyle Management Application

**Pseudocode**

1. Start program

2. Initialize variables and lists as needed.

3. Display "Main Menu".

4. While (userInput != 0):

5. Display menu options.

6. Get user input for menuItem.

7. Switch (userInput):

Case 1:

Call showList().

For each item in currentList[i]:

Display item.

End For

Break and End Case

Case 2:

Call addItem().

Display "Add Item".

Get user input for item.

Add item to currentList[i].

Increment itemCount.

Call showList().

Display "Add Item End".

Break and End Case

Case 3:

Call removeItem().

Display "Remove Item".

Get user input for index.

If index is valid:

Remove item at index from currentList[i].

Call showList().

Display "Remove Item End".

Break and End Case

Case 4:

Call predictDay().

Display "Predict Day".

Get user input for day.

Get user input for predict.

Calculate predicted day.

Display predicted day.

Display "Predict Day End".

Break and End Case

Case 5:

Call calculate().

Display "Converter".

Display converter menu options.

Get user input for index.

Perform conversion based on index.

Display result.

Display "Converter End".

Break and End Case

Case 0:

Break the loop (exit the while loop).

Break and End Case

Default:

Display "Enter a valid option".

Break and End Switch

8. End While

9. Display "Program End".

Lifestyle Management Application

# **Application Interface**

**1. Main Menu and Program Control:**

A screenshot of a computer program

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-This is the source code where the program brings the user to a specific destination based on their input.

For example:

* If the user enters "1" into the scanner, the program will direct the user to the showList() method, where they are able view the To-Do list, performing the action "Display to-do list" as indicated in case 1.
* If the user enters "2," the program will lead them to the addItem() method, enabling them to add an item to the To-Do list as indicated in case 2.
* If the user enters "3," they will be directed to the removeItem() method, allowing them to remove an item from the To-Do list based on case 3.
* If the user enters "4," the program will execute the predictDay() method, where user are able to predict a day after a specified number of days from the current day, as indicated in case 4.
* If the user enters "5," the program will take them to the converter() method, providing various unit conversion options based on case 5.

**2. Menu Display and User Input:**

A screen shot of a computer program

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-These codes displays the interface to acknowledge the users of the instructions available for the program to execute.

**3. To-Do List Display and Manipulation:**

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-The code in the showlist() method will be executed once the user enters option 1 (Display To-Do List), showing the list of tasks to be completed by the user.

**A screen shot of a computer code

Description automatically generated4. Add Item into To-Do List:**

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Description automatically generated**

-The code in the addItem() method will be performed once the user enters option 2 (Add Item), whereby the program will prompt the user to input a new task.

**5. Remove Item from To-Do List:**

**A screen shot of a computer

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A screen shot of a computer

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-The code which falls in the removeItem() method will be conducted once the user inputs option 3 (Remove Item), hence the program will prompt the user for an input (Scanner) to select which completed / cancel tasks that is needed to be removed from the current to do list.

**6. Days Prediction:**

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A screenshot of a calendar

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-The code in the predictDay() method will be executed once the user enter option 4 (Days Prediction), where the program prompts the user to input today’s day and specify the number of days after the current day.

For example:

* Today is 23/07/2023 (Sunday)
* The day that I need to predict are 5 days later from today.
* The calculation will then be performed by the predictDay() method and hence showing Friday(28/07/2023) as a result.

A computer screen shot of a program code

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-The converter() method's code will be executed when the user enters option 5 (Converter), and subsequently, the program will switch to a different interface, prompting the user to choose their desired type of conversion.

For example:

* Body Mass Index (BMI)
* Calculate the inch(in)/ foot(ft)/ centimetre(cm) of user’s height
* Metric Converter (km -> m, Celsius -> Fahrenheit and etc)

**8. Body Mass Index (BMI)**

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-If the user enter option 1 in the converter() method, it will perform a calculation whereby the program asks the user to input their weight and height. This program will then calculate and provide a result to let users know their current body status such as if they are Underweight/ Normal weight / Overweight / Obesity.

For example:

* If user’s weight is 86 kg
* If user’s height is 1.68m
* After the calculation from the program, it displays the result with obesity.

A screen shot of a computer program

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-If the user opts for option 2 within the convertor() method, it will then execute the block of code shown above where it allows users to input the value known to them and the program will use the user’s value and convert it to other type of measurement.

For example:

* If the users height is 168 in centimetre (cm) but is curious to find out his height in different type of measurement like feet and inch.
* Therefore, the user will choose option 1 and enter his height in (cm).
* As a result, the program will print out the user’s height in feet and inch measurement.

**10. Metric Converter**

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- The code above shows that when the user selects option 3 within the converter() method. In this code section, the user will be prompted to choose one option from multiple choices that helps to convert one value to another.

For example:

* If the user is curious to know what Fahrenheit (oF) of 34 is equal to in Celsius (oC).
* Hence, user can choose option 13 to perform the calculation.
* In result, the Fahrenheit for 34 Celsius is 93.2 (oF).

Lifestyle Management Application

**Conclusion**

In conclusion, “Lifestyle Management Application” also know as “LMAO” is a lifestyle application that helps user to stay organized, productive, and ahead of schedule with its wide range of features. We hope “LMAO” will continue to strive and become even better than the other mediocre applications out there. We are committed to continuously support “LMAO” and attempt to make it the best it can be. “LMAO” has always been a passion project, and we hope our passion for this project will resonate with the users.

**Icon and Poster of LMAO**

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Icon of LMAO

Lifestyle Management Application

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Poster of LMAO