Installation Guide for BehKokWei_LohKaiTerng_TanChiCai Project

This guide will help you set up and run the To-do List Manager, GPA Calculator, and Expense Tracker applications using the base Anaconda environment.

Important: Directory Check

You must run the code from the following directory to ensure the application works correctly: C:\DCS1S2G2-BehKokWeiLohKaiTerngTanChiCai

If you attempt to run the application from any other directory, it will show an error message and will not execute. Please make sure to follow these steps carefully.

Group Member's Applications:

- **To-do List Manager** (Loh Kai Terng)
- **GPA Calculator** (Tan Chi Cai)
- **Expense Tracker** (Beh Kok Wei)

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1. Download and Install Anaconda

Before you begin, you need to install **Anaconda**, which includes Python and essential tools like `'conda'` for managing environments.

- **Step 1:** Download and Install Anaconda:
  - Go to the Anaconda Getting Started Page or access the link provided in Google Classroom by Ms. Goh https://docs.anaconda.com/anaconda/getting-started
  - Choose the correct version for your operating system (Windows, macOS, or Linux).
  - Download and install Anaconda by following the on-screen instructions.
- **Step 2:** Verify Anaconda Installation:

Open **Anaconda Prompt** (on Windows) or **Terminal** (on macOS/Linux) and type: `conda`

  - This should confirm that `'conda'` is installed and working.

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2. Python Installation

Anaconda comes with Python already installed, so there's no need to install it separately. To verify that Python is available:

Run the following command in the Anaconda Prompt or Terminal: `python`

You should see a response like:

```
Python 3.12.7 | packaged by Anaconda, Inc. |
(main, Oct  4 2024, 13:17:27) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
```

This confirms that Python is correctly installed.

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3. Running the Application

Important: You must be in the correct directory to run the code. The directory must be:

```
C:\DCS1S2G2-BehKokWeiLohKaiTerngTanChiCai
```

If you are not in the correct directory, the application will not run and will show an error message.

To run the application:

1. **Navigate to the Correct Directory:**
    - Open **Anaconda Prompt**.

Navigate to the directory where the folder *`DCS1S2G2-BehKokWeiLohKaiTerngTanChiCai`* is located: `cd C:\DCS1S2G2-BehKokWeiLohKaiTerngTanChiCai`

2. **Run the Main Menu Script:**

Execute the following command to run the application: `python MAIN_MENU_TO_DO_LIST_MANAGER_KAITERNG.py`

- The menu interface will appear, allowing you to choose between the To-do List Manager, GPA Calculator, or Expense Tracker.

To-Do List Manager(Loh Kai Terng)

Overview

The **To-do List Manager** is designed to help users efficiently manage their tasks with ease. Using a simple and intuitive graphical user interface (GUI) built with Tkinter, this application allows you to create, view, edit, and organise tasks in a user-friendly manner. All task data is stored in a JSON file (.txt), ensuring that your tasks are saved and accessible across sessions. This system offers key features such as task creation, editing, deletion, task completion tracking, search, and deadline-based filtering.

Features

- **Task Creation**: Quickly create new tasks by providing a **title**, **description**, and **deadline**.
- **Task Management**: **Edit**, **delete**, or **mark tasks as completed** with just a few clicks.
- **Task Filtering**: Easily **filter tasks by deadlines**, such as "Today", "Tomorrow", "Next Week", or any custom deadline you choose.
- **Search Functionality**: **Search for specific tasks** by entering keywords in the title.
- **Data Persistence**: Your tasks are saved and retrieved from a JSON file, allowing the system to remember your tasks even after closing and reopening the application.

Instructions

1. Adding a Task:

- **Step 1**: In the "Task Title" field, enter a title for your task. (If left empty, clicking the "Add Task" button will display an error message.)
- **Step 2**: In the "Description" field, provide additional details about the task.
- **Step 3**: Select a deadline from the available options (Today, Tomorrow, Next Week), or enter a custom deadline.
- **Step 4**: Click the "Add Task" button to save your task to the list.

2. Editing a Task:

- **Step 1**: Find the task you wish to modify and click the "Edit" button next to it.
- **Step 2**: In the "Edit Task" window, you can update the task’s title, description, or deadline. (If the "Task Title" is left empty, an error message will appear when you press "Done" or "Back".)
- **Step 3**: After editing, click "Done" to save your changes, or click "Delete" to remove the task completely.

3. Marking a Task as Completed:

- **Step 1**: Next to the task you wish to mark as completed, click the "Complete" button.
- **Step 2**: The task will be moved to the bottom of the list and displayed with a strike-through to indicate it's completed.

4. Searching for a Task:

- **Step 1**: In the "Search by Title" field, type a keyword related to the task you are looking for.
- **Step 2**: Click the "Search" button to filter the tasks and display only those that match the keyword.

5. Filtering Tasks by Deadline:

- **Step 1**: Choose a deadline filter from the dropdown options (Today, Tomorrow, Next Week) or type in your own deadline.
- **Step 2**: Click the "Filter" button to display tasks that match the selected or entered deadline.

Installation

1. **Set Up the Application:**
   Once you have received the folder with the application files, you should already have the necessary task storage file (***tasks.txt***). This file is used to store tasks, their status, and priority levels.
   - **Note:** If the ***tasks.txt*** file does not exist in the folder, the application will automatically create it when you run the program.
2. **Run the Application:**
   To run the application, follow these steps:
   - **Step 1:** Open anaconda prompt.
   - **Step 2:** Navigate to the directory where the (***DCS1S2G2-BehKokWeiLohKaiTerngTanChiCai***) folder is located.

Step 3: Execute the following command to run the application: python MAIN_MENU_TO_DO_LIST_MANAGER_KAITERNG.py

3. The application will start, and the menu interface will appear, allowing you to interact with the To-do List Manager after pressing its button. If the ***tasks.txt*** file was not present, it will be created automatically upon running the application.

GPA CALCULATOR(Tan Chi Cai)

Overview

This **gpa calculator system** allows users to calculate their gpa by entering their coursework mark and final exam mark for the course. It uses a graphical user interface (GUI) built with Tkinter and retrieves course names from an Excel File(.xlsx) .The system provides various features, such as a Calculate GPA,Add Course,Clear and Display Result.

Features:

- **Calculate GPA:**Users can choose their course,entering their coursework mark and final exam mark of the course,then click the calculate button to calculate their gpa.As a result,they can know the process of calculate gpa,including course,credit of the course,grade of the course,grade point of the course,total grade point of the course and description of the course.
- **Add Course:** Users can add rows to the system,enabling user to calculate mark for each course until the maximum of course in that semester.
- **Clear Inputs:**Users clear all input fields and reset the interface for new data entry.
- **Display Results:** Once the GPA is calculated,users can enter the display button so as to go to the next page to see the result is displayed on the screen. This could include the course name,course grade,credit point earned,total credit point earned,grade point average(gpa) and the cumulative grade point average(cgpa).

Instructions

1.Calculate GPA

- **Step 1:** In the "Course" field, Select a course from the dropdown options.
- **Step 2:** In the "Coursework Mark" field, Enter your coursework mark.Make sure the coursework mark is more than equal to 50.
- **Step 3:** In the "Final Exam Mark" field, Enter your final exam mark.
- **Step 4:** Click the "Calculate" button to calculate the gpa.
- **Step 5:**Not only that, users can also directly press enter key to calculate gpa in the presence of input.
- **Step 6**:user can also press ‘enter’ key when put cursor inside input field
- **Step 7**:press the ‘back’ button go back to previous page which is main menu
- **Step 8**:press the ‘clear’ button to clear all input and rows inside,finally become one row with empty input.

2.Adding course:

- **Step 1:** Click the "+ Add More course" button to add the row so as to fill in for other course
- **Step 2:**No only that,user also can press the down key to add more course

3. Back to previous page and displaying the result:

- **Step 1:** Click the "Back" button back to the previous page which is the GPA calculator input interface..
- **Step 2:** press the 'Display' button so as to display the result.
- **Step 3**:press the enter key to display the result.

4.Back to the academic grade tracker interface:

- **Step 1:**press the 'back' button go back to the previous page which is the academic grade tracker interface.

Installation

1.Set Up the Application

- Once you have received the folder with the application files, ensure the folder contains the necessary Excel file (course.xlsx).
- This file is used to store course information needed for GPA calculations.

Note:
If the course.xlsx file is not configured correctly, the application may encounter issues during runtime. Ensure all required files, including the GPA.ico icon file, are in their specified paths.

2.Run the Application:
To run the application, follow these steps:

- **Step 1:** Open anaconda prompt.
- **Step 2:** Navigate to the directory where the (***DCS1S2G2-BehKokWeiLohKaiTerngTanChiCai***) folder is located.

Step 3: Execute the following command to run the application: python MAIN_MENU_TO_DO_LIST_MANAGER_KAITERNG.py

3.The application will start, and the menu interface will appear, allowing you to interact with the **GPA Calculator** after pressing its button.

Expense Tracker(Beh Kok Wei)

Overview:

This Expense Tracker system allows the user to manage their monthly budget, tracking expense spent and analyzing spending patterns. It uses a graphical user interface (GUI) built with Tkinter and stores the expense name, category and amount used in a csv file. This system provides various features, such as Budget management, Expense tracking and Display result.

Features:

- **Set Monthly Budget:** Users can enter the monthly budget and click set budget, so the system will display success or error messages based on input validity entered.

- **Add Expense:** Users can add the expense by specifying the expense name, amount, and category (such as Food, Home, Work, Entertainment and Other) and click add expense. It will put all the expenses into the csv file.

- **Expense File Storage:** System will save all entered expenses to a CSV file (expenses.csv), ensuring data persistence between sessions.

- **Expense Calculation and Analysis:** System will display a list of all expenses, categorize expenses and show the total spending for each category. This system also calculates total monthly spending, remaining budget, and a suggested daily budget based on the remaining days of the month.

- **Clear Inputs:** System will automatically clear all input fields after successfully adding an expense.

- **Dynamic Updates:** System will update the display in real-time after every expense addition, reflecting the latest budget status and expense analysis.

- **Budget Suggestions:** System will calculate and display a daily spending limit based on the remaining budget and the number of days left in the current month.

- **Back to Main Menu:** Once the result is displayed, the user can choose to go back to the main menu by clicking on the back button.

Instructions

1. **Set Your Budget**
   - In the “Enter your monthly budget (RM):” field, input the amount of the user needed for the month and click the “Set Budget” button to save the budget.
   - Ensure the value is positive or else the application will show an error message. If successful, the application will confirm the set budget.

2. **Add an Expense**
   - Under the “Expense Name” field, enter the name of the expense (such as burger, mouse, pokemon doll).
   - In the “Expense Amount (RM):” field, enter the amount spended for the expense.
   - From the “Select Category” dropdown, choose the category (Food, Home, Work, Entertainment or Other) and after filling in the details, click the “Add Expense” button.
   - If the expense name or amount is invalid, the application will display an error message.
   - If the expense is successfully added, it will be saved and displayed in the text area below.

3. **View Expense Summary**
   - In the text area below, the user can see a list of all expenses that have entered, including expense name, amount and category.
   - A breakdown of total expenses by category, the total amount spent so far for the month and the remaining budget for the month.
   - A calculation of how much money the user can spend per day based on the remaining days in the month.

4. **Return to Main Menu**
   - If you want to return to the Main Menu, click the “Back” button.
   - This will close the Expense Tracker application and open the Main Menu.

Installation

1. **Set Up the Application:**

   Once you have received the folder with the application files, you should already have the necessary expenses storage file (***expenses.csv***). This file is used to store the name, amount and category of the expense.

   - **Note:** If the ***expenses.csv*** file does not exist in the folder, the application will automatically create it when you run the program.

2. **Run the Application:**

   To run the application, follow these steps:

   - **Step 1:** Open anaconda prompt.
   - **Step 2:** Navigate to the directory where the (***DCS1S2G2-BehKokWeiLohKaiTerngTanChiCai***) folder is located.

Step 3: Execute the following command to run the application: `python MAIN_MENU_TO_DO_LIST_MANAGER_KAITERNG.py`

3. The application will start, and the menu interface will appear, allowing you to interact with the Expense Tracker after pressing its button. If the ***expenses.csv*** file was not present, it will be created automatically upon running the application.