**User manual**

**Notes before use**:

The Personal Information Manager (PIM) is a command-line application developed in Python that allows you to manage your personal information records (PIRs). This user manual provides instructions on how to use PIM effectively. To make sure to interact with the system successfully, you should download our whole project in py file version firstly and then run it on any compiler.

**Types of personal information records:**

Our PIM application is designed to manage the following types of PIRs:

1. Contacts: Name, phone number, email, address, etc.
2. Meetings: Date, time, location, attendees, etc.
3. Tasks: Task name, priority, deadline, status, etc.
4. Notes: Topic, content, date, etc.

**Restrictions associated with different types of personal information records:**

1. Contacts: With each input data, the data type must be matched up to prevent error. And noticed that for each phone number or email address, there must be only one name to carry for them.
2. Meetings: For each meetings, just like the usual ones, there must exist the time for begin and end, and attendance should be circled out for verification.
3. Tasks: The update time on deadline and status of feedback on time must be guaranteed.

**How to work with the PIM system:**

1. Adding a PIR: This is how you save a new personal information record. To do this, use the add command followed by the details of the PIR. We'll explain the exact format and any restrictions based on your PIM version in the next section.
2. Searching for a PIR: Need to find something? Use the search command followed by the details you're looking for.
3. Updating a PIR: Made a mistake or need to change something? No problem! Use the update command followed by the record details and what you want to change.
4. Deleting a PIR: If you don't need a record anymore, use the delete command followed by the record details.
5. Printing out PIR: If you need to print out specific information from PIR, then use the print out command and input the right position to get the information.

**Handling of invalid input commands:**

PIM communicates with you directly through the command line interface. It will tell you the results of each command, whether you've added a new PIR, found a record, updated a detail, or deleted a record. It's like having a conversation with your PIM! However, if an input command is invalid, the application will return an error message specifying the issue. For instance, if you attempt to add a contact without a name, you'll receive a message like "Error: Each contact must have at least a name."

**Interpreting the Output of the PIM:**

It is clear that from the user interface, you could see the output of PIM after each command through visualization. The PIM outputs are designed to be human-readable and easy to understand. For instance, if you add a contact, you'll see a confirmation like "Contact successfully added." If you view all tasks, tasks will be displayed in a tabular format with task names, priorities, deadlines, and statuses. The much more details would be shown in the video.