# Task Management System

Intro to Programming
CMPT 120L

**MOMAP**



Marist College
School of Computer Science and Mathematics

Submitted To:
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**Team Name**
MOMAP

**Team Members**
1. Marissa Ratschki                                                marissa.ratschki1@marist.edu (Team Head)
2. Marlene Santiago-Cuevas                    marlene.santiago-cuevas1@marist.edu (Team Member)
3. Prashna Khadka                                            prashna.khadka1@marist.edu (Team Member)
4. Anna Chen                                                                    anna.chen1@marist.edu (Team Member)
5. Olufunke Gando                                                          olu.gando1@marist.edu (Team Member)

# Description of Team Members

### 1. **Marissa Ratschki**
*My name is Marissa Ratschki. I'm 21 years old, and a sophomore majoring in Cybersecurity at Marist College. Although limited, I have experience in HTML, CSS, and Python through collegiate level courses at Champlain College. My choice to work with team MOMAP was based on the group's eagerness to learn within the computer science field, as well as their dedication to academia and willingness to collaborate. Furthermore, I am enthusiastic about the prospect of working with a team of women in the computer science domain–and am confident that through our shared passion for learning, we will put forth a productive learning experience and resulting project.*

### 2. **Marlene Santiago-Cuevas**
*Greetings, my name is Marlene Santiago-Cuevas, and my major is Computer Science. I began my interest in programming in my junior year of high school and have not lost interest since. I began to take classes surrounding the subject such as Programming 101 and 102 and AP Computer Science A. As a first-year student in college, it has been exciting to engage with a group of young adults who share the same passion. I easily connected with my team members, and that is essential when working together to create an exceptional project. Working together I'm confident we will use our skills to help each other with our certain areas of weaknesses. Our team head was elected based on skill and experience with the required website and coding.*

### 3. **Prashna Khadka**
*My name is Prashna Khadka. I'm a freshman majoring in Computer Science with a concentration in Software Development. I'm enrolled in the Intro to Programming course as it is required for my major. I have a little bit of experience with Python from my high school computer science course but it was primarily focused on pseudocode. I wanted to work with my current team members because they are proactive and committed to creating a successful project. We elected our team head based on her familiarity with Github and her prior experience in coding.*

### 4. **Anna Chen**
*My name is Anna Chen, and I'm a junior studying Business Administration with a concentration in Marketing and a minor in Cybersecurity. I have some experience in coding from my AP course in high school, but otherwise, I don't know much about Python. That being said, I wanted to work with MOMAP because, despite my inexperience, everyone was still very welcoming and willing to work with me on this project. I am very excited to work with a group of welcoming and intelligent women and can't wait to see what we can do together. We decided that the team lead would be the person who knew the most about*

*GitHub and had the most prior experience in coding. After discussing with the group, it was collectively decided that Marissa was the most experienced, and should be the team lead.*

5. **Olufunke Gando**
*My name is Olufunke Gando, and I am 20 years old. I am a freshman taking Intro to Programming since it is a requirement for my major in Computer Science. I have no prior experience with programming so this will be my very first project. I wanted to work with my current team members because we all gravitated toward one another, and they are all women who are confident in themselves and what they are doing. We selected the head of our team based on familiarity with GitHub and different programs.*

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# Project Objective/Project Description

Our Task Management System (TMS) presents our users with a calendar for their chosen week, month, or year. It also organizes personal tasks for different users on a specific day. Users can also view and modify their personal calendar information. Our TMS will save data for different user types in separate comma-separated value (CSV) files.

The system will support the following features:
    a. An admin username and password for log-in.
    b. Option to change the admin username and admin password.
    c. A normal user can be added to the Task Management System by creating a new username and password.
        i. They will not be able to define or remove other users.
    d. Users can be removed from the Task Management System by erasing their login credentials.
        i. This will also erase the corresponding recorded data.

Each user will be able to:
    a. Add a task to the Task Management System.
        i. Each task will contain a title, time, duration, and description.
    b. Remove a task.
    c. Edit a task's details.
    d. Search through the Task Management System by time, title, or duration, then list and view the results on the screen.

Our Task Management System will be a user-friendly software, such that:
    a. It will show a welcome page and provide a menu of all functions available to the user on each page.
    b. It will display a well-organized calendar for every month or year.
    c. It will display a warning whenever a user attempts to enter contact information with a name that already exists in the history.
    d. Our Task Management System will have an exit function and thank the user for using our software.

Our Task Management System will protect user information, such that:
    a. The Task Management System user passwords and recorded information will be ciphered using Caesar cipher methodology.

# GitHub Repository Address

https://github.com/mratschki/CMPT120L-114_Task-Management-System_MOMAP.git

# User Experience Design

**Login Page:**

      Input: The user enters a username and password.

      Output: If the username and password are valid, the user gains access to the main menu.

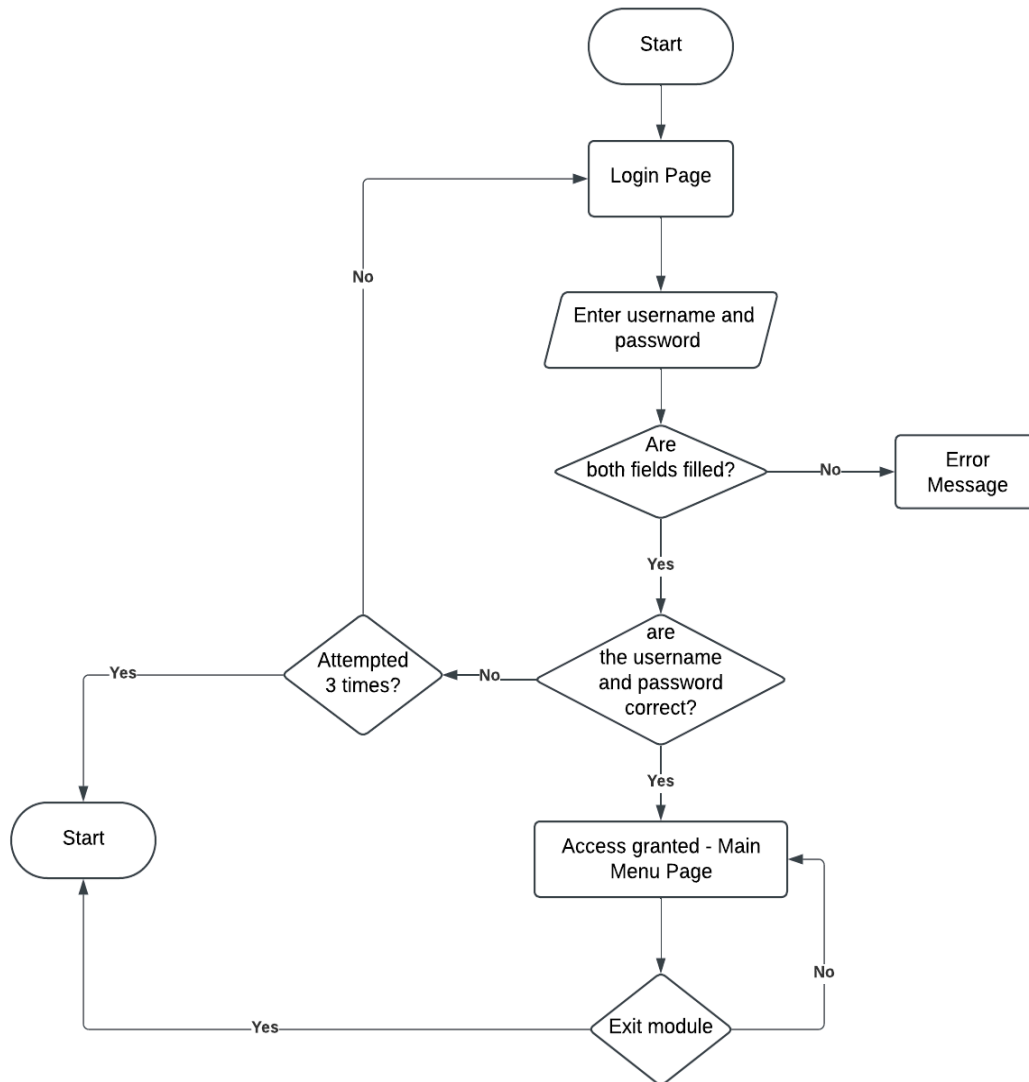      If invalid, an error message ("Invalid username or password") is displayed.



Figure 1: Login Page Flowchart

**Main Menu:**

Input: The user will select "add," "remove," "edit," "search," or "calendar."

Output: This will bring the user to the selected action page screen.
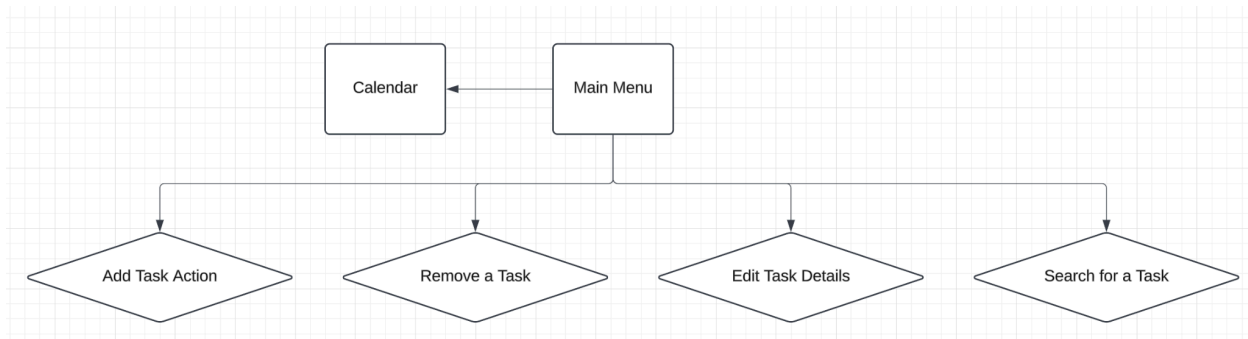


Figure 2: Main Menu Flowchart

**Add Task:**
    Input: The user adds a task
    Output: The task is saved and the user is returned to the main menu screen.
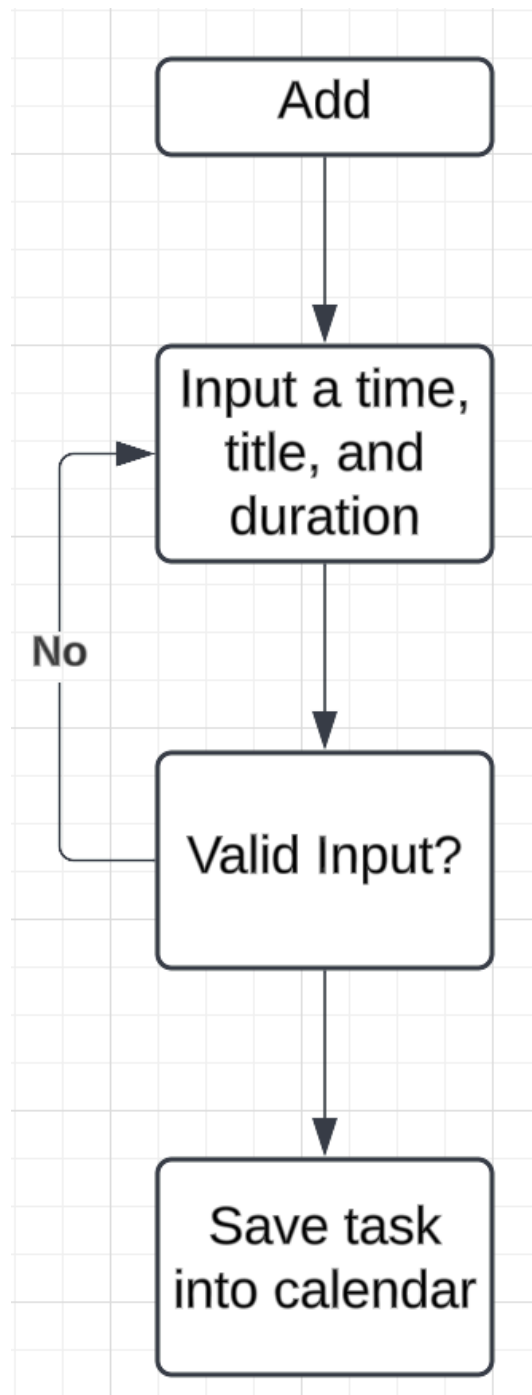


Figure 3: Add Task Flowchart

**Remove Phase:**
    Input: The user selects a task to be deleted
    Output: The user is prompted to confirm if that is the task they want to delete. If the user clicks yes, then the task is deleted. If the user clicks no, they will be returned to the main menu screen.
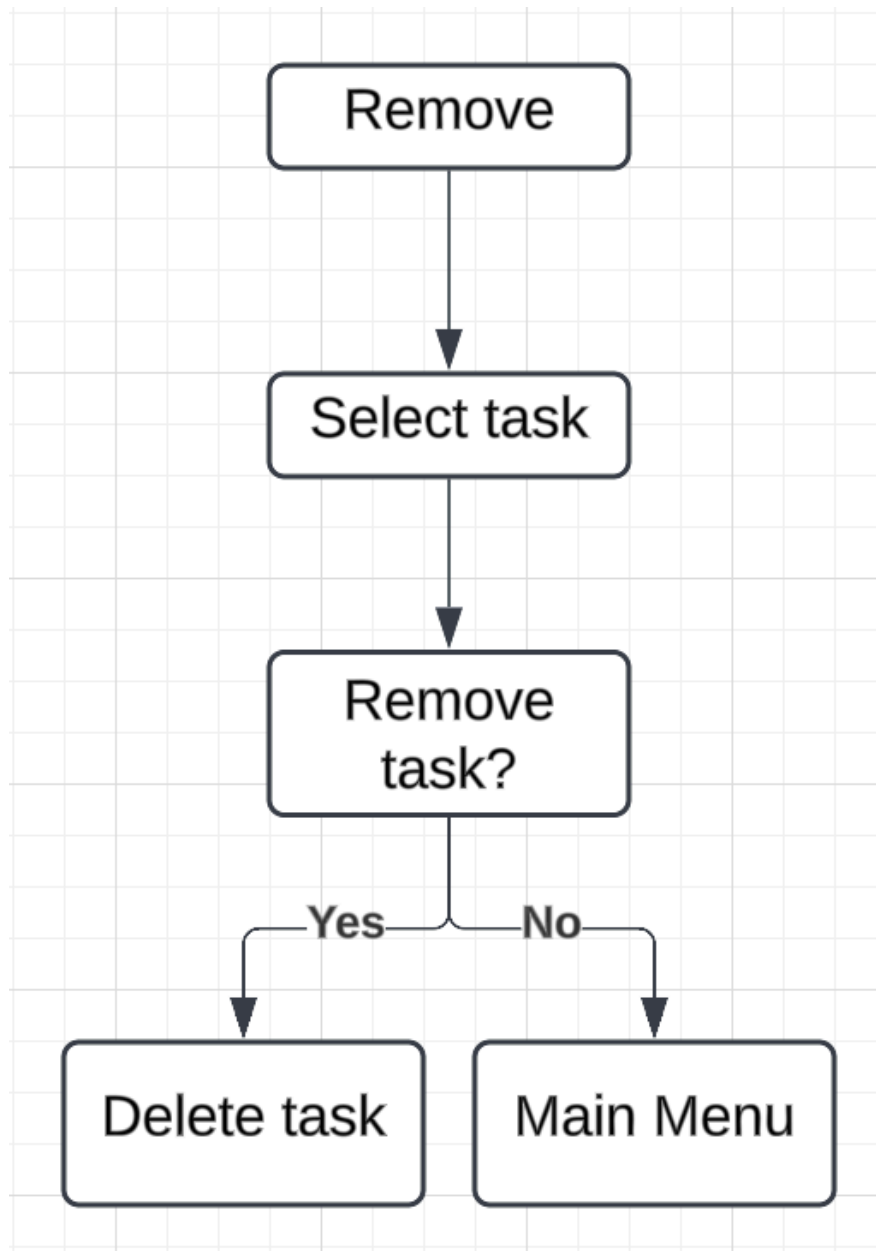


Figure 4: Remove Task Flowchart

**Search Task:**

Input: The user searches a task by time, title, or duration.

Output: Search tasks from the categories of time, title, or duration and views results.

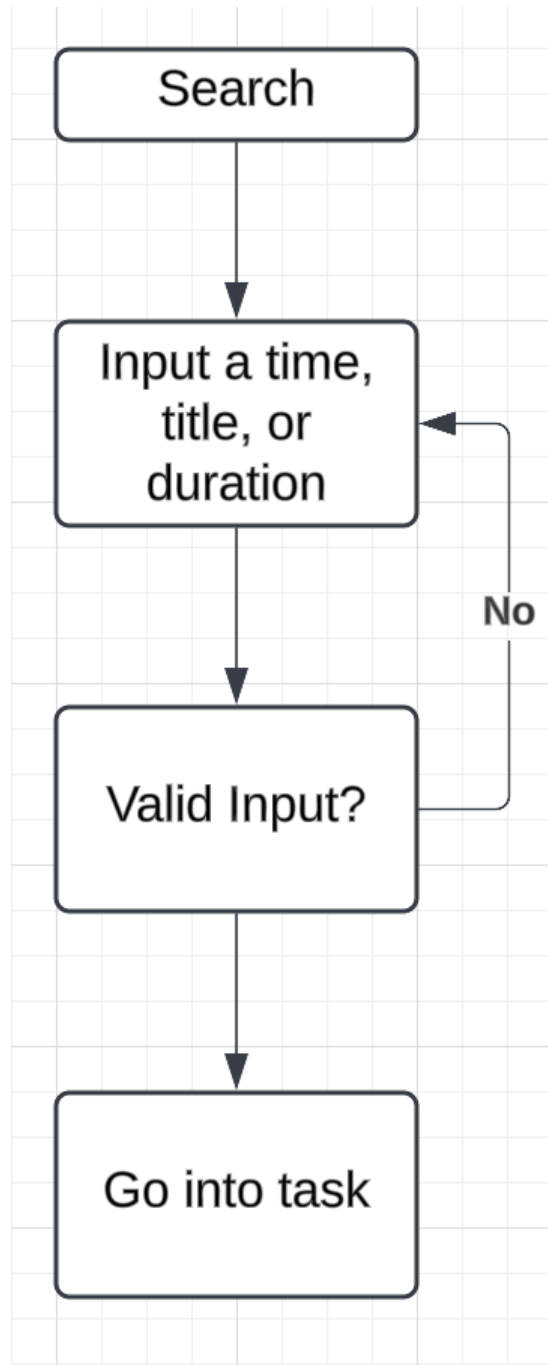Results display on the screen, and then proceed to the main menu.

```
┌─────────────────────┐
│       Search        │
└─────────────────────┘
          │
          ▼
┌─────────────────────┐
│    Input a time,    │◄──────┐
│      title, or      │       │
│      duration       │       │
└─────────────────────┘       │
          │                   │
          │                 No│
          ▼                   │
┌─────────────────────┐       │
│                     │       │
│    Valid Input?     │───────┘
│                     │
└─────────────────────┘
          │
          ▼
┌─────────────────────┐
│                     │
│    Go into task     │
│                     │
└─────────────────────┘
```

Figure 5: Search Task Flowchart

**Edit Task:**

Input: The user selects a task to edit.

Output: The user can edit tasks from time, title, or duration. The screen will display if the user wants the changes to be saved. If the user selects yes, the changes will be saved and then they will be brought back to the main menu. If the users select no, they will be brought back to the edit page.
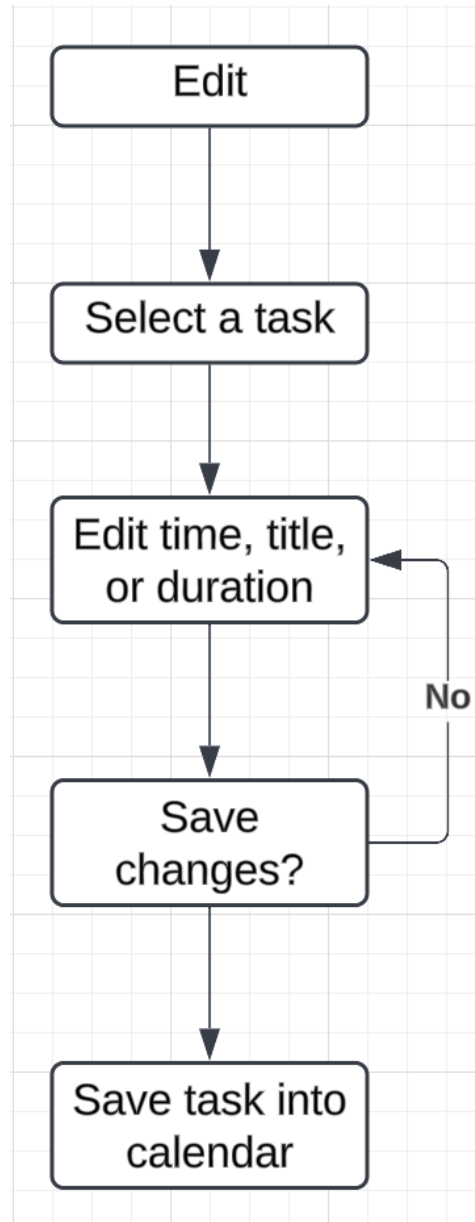


Figure 6: Edit Task Flowchart

**Calendar Page:**
> Input: The user selects to view their calendar for a selected month.
> Output: The screen will display all the tasks that the user inputted in the selected month.
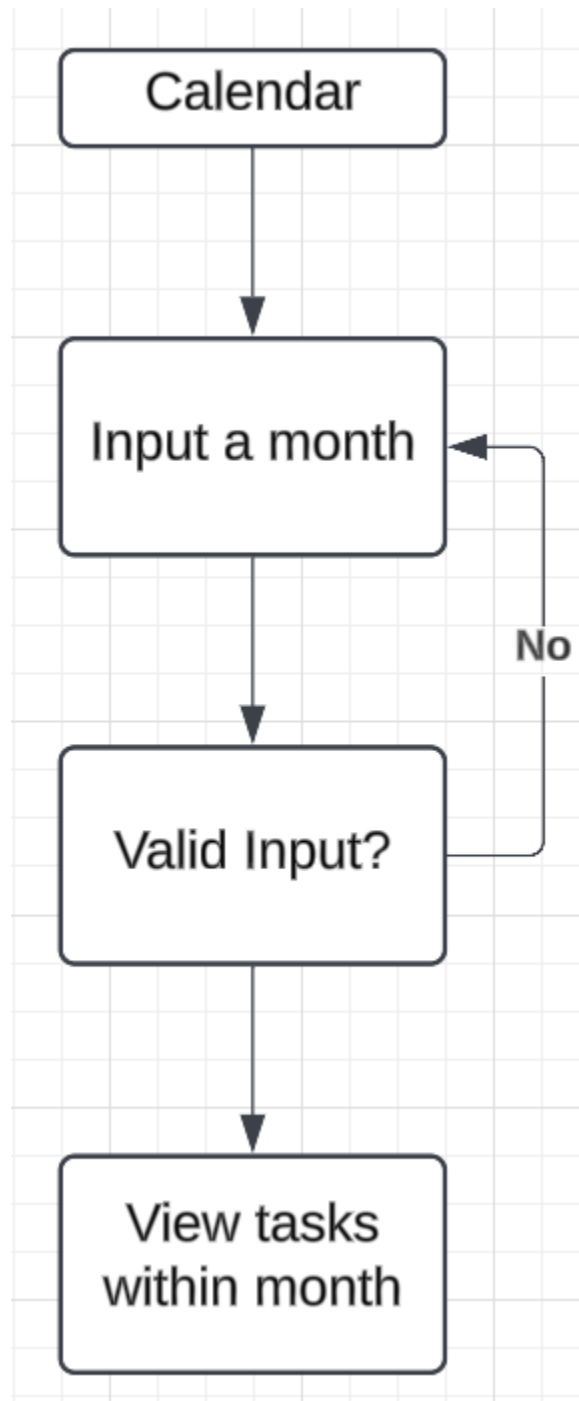
Figure 7: Calendar Page Flowchart

# Virtual Environment

**Creating the code:**

```
 Last login: Tue Nov  5 21:42:15 on ttys001
[annachen@148-100-170-111 ~ % sudo pip3 install virtualenv                    ]
[Password:                                                                    ]
 WARNING: The directory '/Users/annachen/Library/Caches/pip' or its parent directo
 ry is not owned or is not writable by the current user. The cache has been disabl
 ed. Check the permissions and owner of that directory. If executing pip with sudo
 , you should use sudo's -H flag.
 Requirement already satisfied: virtualenv in /Library/Frameworks/Python.framework
 /Versions/3.12/lib/python3.12/site-packages (20.27.1)
 Requirement already satisfied: distlib<1,>=0.3.7 in /Library/Frameworks/Python.fr
 amework/Versions/3.12/lib/python3.12/site-packages (from virtualenv) (0.3.9)
 Requirement already satisfied: filelock<4,>=3.12.2 in /Library/Frameworks/Python.
 framework/Versions/3.12/lib/python3.12/site-packages (from virtualenv) (3.16.1)
 Requirement already satisfied: platformdirs<5,>=3.9.1 in /Library/Frameworks/Pyth
 on.framework/Versions/3.12/lib/python3.12/site-packages (from virtualenv) (4.3.6)
 WARNING: Running pip as the 'root' user can result in broken permissions and conf
 licting behaviour with the system package manager, possibly rendering your system
  unusable.It is recommended to use a virtual environment instead: https://pip.pyp
 a.io/warnings/venv. Use the --root-user-action option if you know what you are do
 ing and want to suppress this warning.
 annachen@148-100-170-111 ~ % python3 -m venv MOMAP
 annachen@148-100-170-111 ~ % source MOMAP/bin/activate
 (MOMAP) annachen@148-100-170-111 ~ % ▓
```

Figure 8: Creating the Virtual Environment MOMAP

**List of Packages to be used:**
Numpy
Matplotlibs
Tkmacos
Tkinter
OS

```
(MOMAP) annachen@148-100-170-111 ~ % python3 -m pip list
Package            Version
---------------    -----------
colour             0.1.5
contourpy          1.3.0
cycler             0.12.1
fonttools          4.54.1
kiwisolver         1.4.7
matplotlib         3.9.2
numpy              2.1.3
packaging          24.1
pillow             11.0.0
pip                24.3.1
pyparsing          3.2.0
python-dateutil    2.9.0.post0
six                1.16.0
tk                 0.1.0
tkmacosx           1.0.5
(MOMAP) annachen@148-100-170-111 ~ %
```
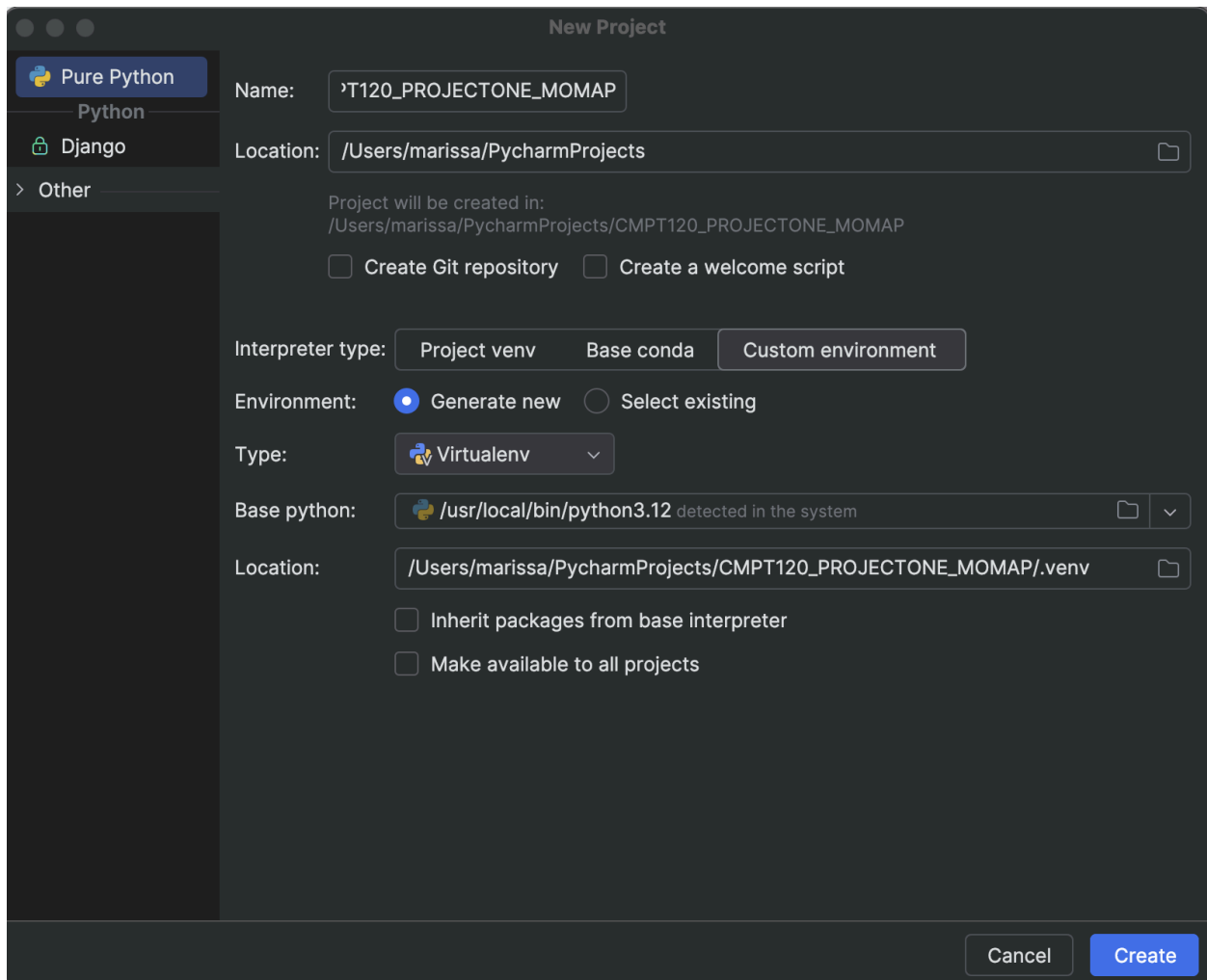
Figure 9: List of Packages Install in Virtual Environment

**Running IDE on a Virtual Environment:**



Figure 10: Running IDE on a Virtual Environment

# References

[1]https://lucidchart.com/blog/flowchart-templates
[2]https://github.com/RezaSadeghiWSU/CMPT-120L-112_Task-Management-System_Maddie-Gaby.git