

St. Patrick's School

Guitar Ensemble App

User Guide

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Application Setup

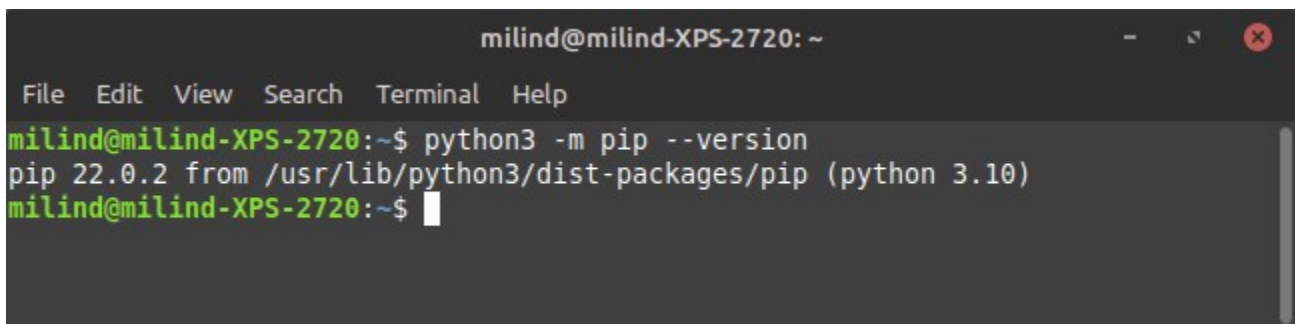
Prior setup is required to ensure that the application runs smoothly. Any any point of the setup, should you feel to clarify something, you may contact Advait (email and phone number written behind to clarify all your doubts on this setup).

Python Installation

To start, please install Python (at least version 3.12.0) from <https://www.python.org/downloads/>. Once you are done with this step, please ensure that Python is added to PATH successfully so that you can run Python through the command `python`, `python3` or `py` on the relevant operating system terminal (Powershell, Terminal or Command Prompt). To run commands on your system terminal, enter the command that will run Python (possibilities shown above), and press “Enter” or “return”. This will run Python. To exit, enter `exit()`. Your Python command and system terminal will differ from system to system.

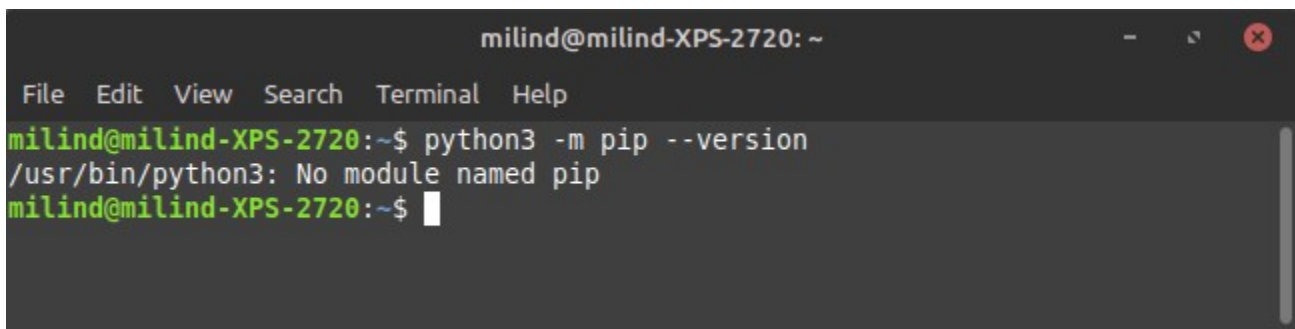
PIP Installation

This app will also require another one of Python’s features, known as PIP, or the Python Package Manager. To ensure that it has been installed, please run the command `python3 -m pip --version`. Please cross-check it using the Figures below. The error messages printed may not be the same as Fig 1.1 and Fig 1.2, as it may vary from computer to computer and operating systems.



```
milind@milind-XPS-2720: ~  
File Edit View Search Terminal Help  
milind@milind-XPS-2720:~$ python3 -m pip --version  
pip 22.0.2 from /usr/lib/python3/dist-packages/pip (python 3.10)  
milind@milind-XPS-2720:~$
```

Fig 1.1: Successful Python Package Manager installation

A terminal window titled 'milind@milind-XPS-2720: ~' with a menu bar (File, Edit, View, Search, Terminal, Help). The command 'python3 -m pip --version' is entered, and the output is '/usr/bin/python3: No module named pip'.

```
milind@milind-XPS-2720: ~  
File Edit View Search Terminal Help  
milind@milind-XPS-2720:~$ python3 -m pip --version  
/usr/bin/python3: No module named pip  
milind@milind-XPS-2720:~$
```

Fig 1.2: Unsuccessful Python Package Manager installation

If the package is not successfully installed, you will not be able to use the application. To rectify this issue, please install PIP using the command `python -m ensurepip --upgrade` or by appending `-m ensurepip --upgrade` to the back of the command that launches Python on your computer.

Entering the folder on the terminal

To install the required dependencies for the application to run, open the URL <https://github.com/contyadvait/QuarterMasterLoanSystemUpdated> on your computer. Once you have opened this page, please press the code button on the top right of the of the website (as shown in Fig. 1.3) and press the “Download ZIP” button on the dropdown (Fig. 1.4)

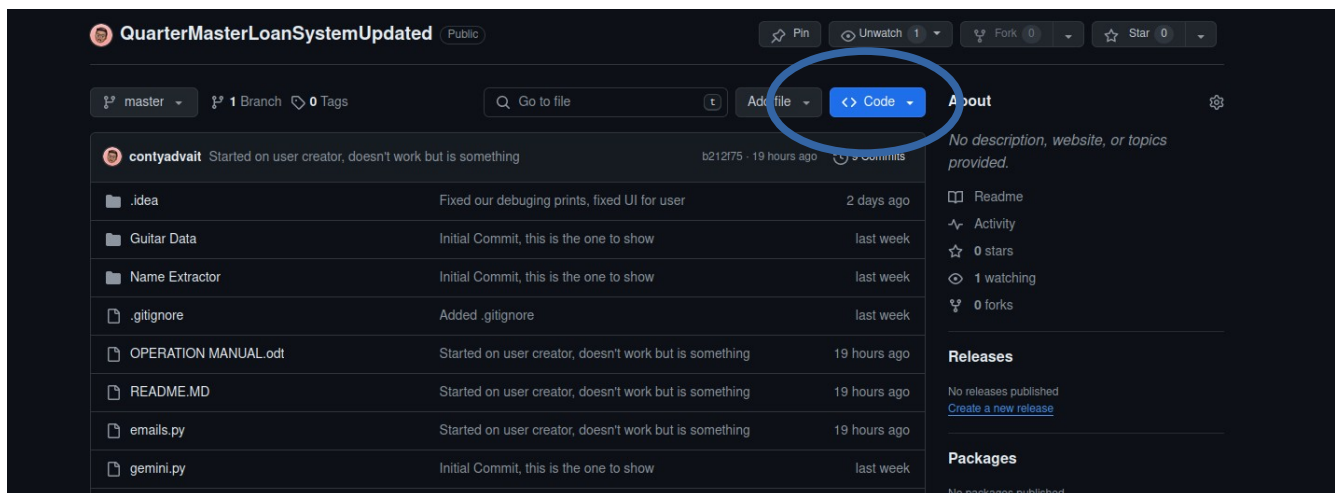


Fig 1.3: The code button on the website

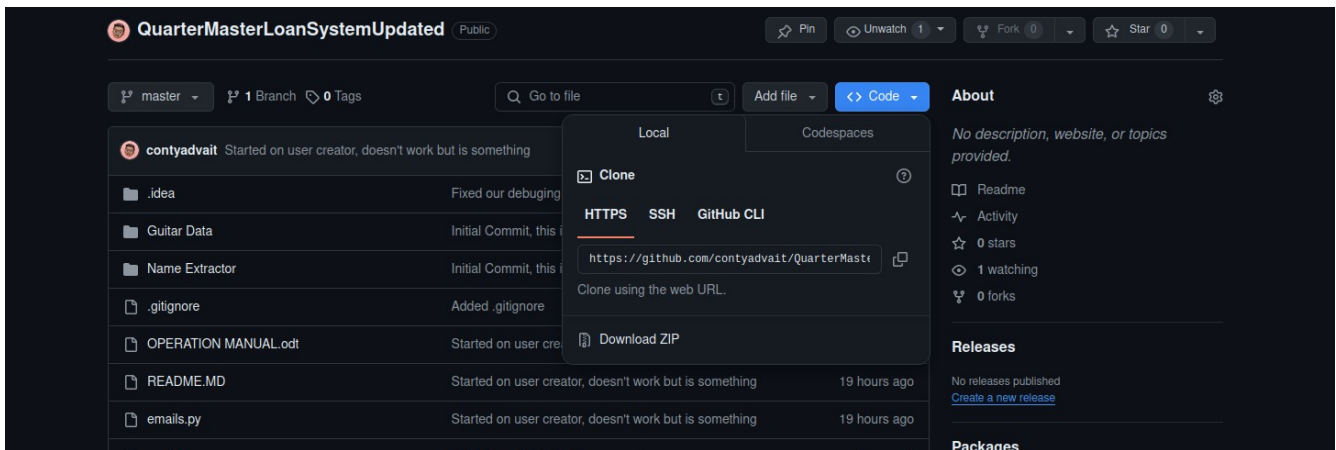


Fig 1.4: The “Download ZIP” button on the code button dropdown

Once you are done, please open your File Explorer, Finder, or your file manager as per your operating system and extract the ZIP file into a folder into a location on your computer that you can easily access. Once you are done, please open the Terminal (Powershell, Command Prompt, or Terminal) and type in `cd`. Once done typing, switch back to your file manager window with the folder open (Fig 1.5). Drag that into the terminal and press the “Enter” or “return” key on your keyboard.

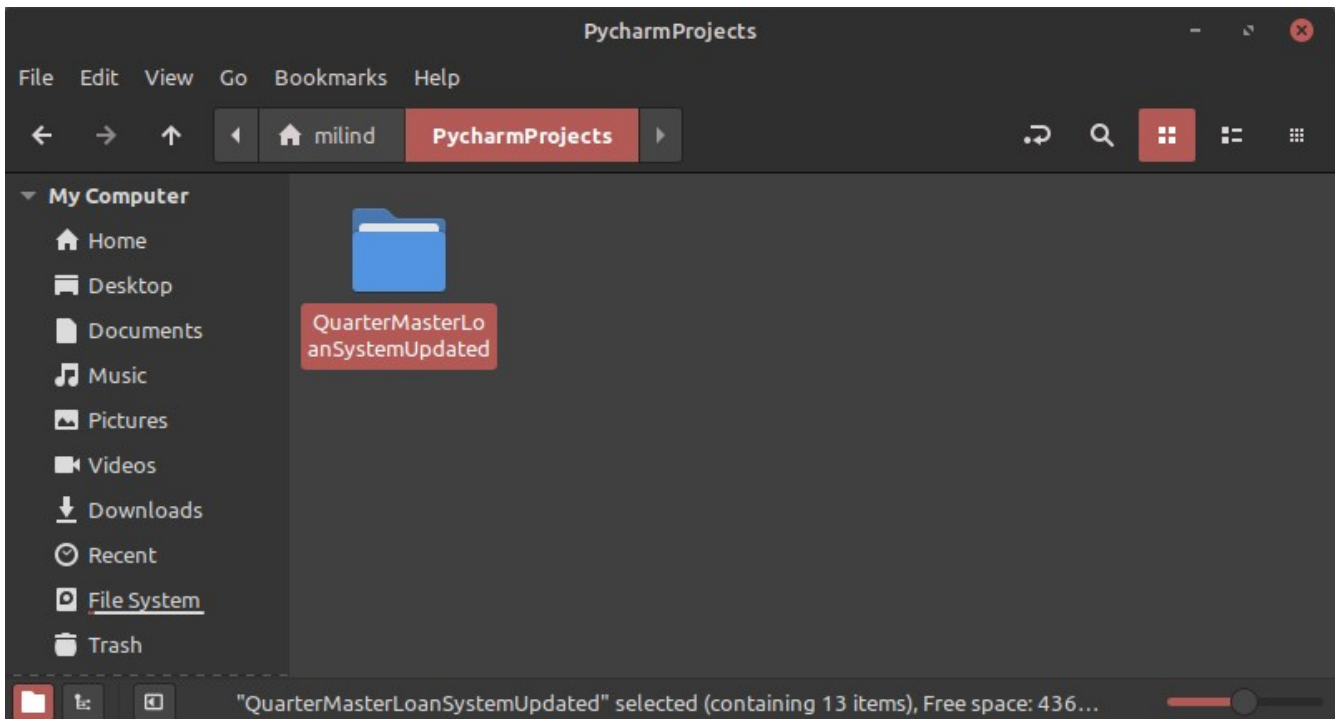
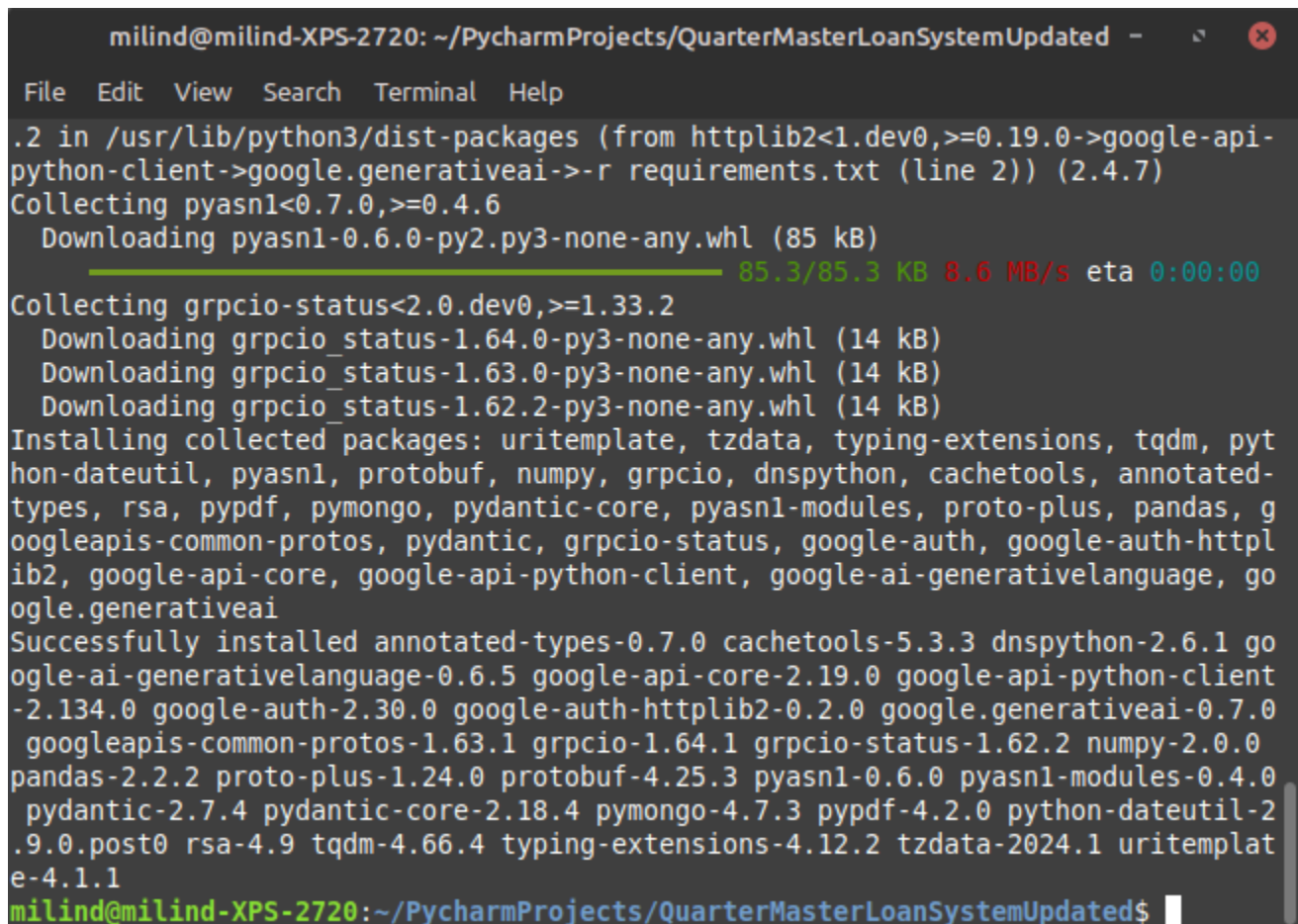


Fig 1.5: A photo of the folder being selected. This folder is to be dragged into the terminal

Once this step has been done, you may move on to installing the required packages.

Installing the packages

To install the relevant packages, type in the command that runs Python on your computer, and add `-m pip install -r requirements.txt`. Once you are done running this command, there should be no error messages. Your system terminal should look similar to Fig 1.6. If you do face this issue, you may contact Advait (email and phone number written behind) and he will try to fix this issue for you.



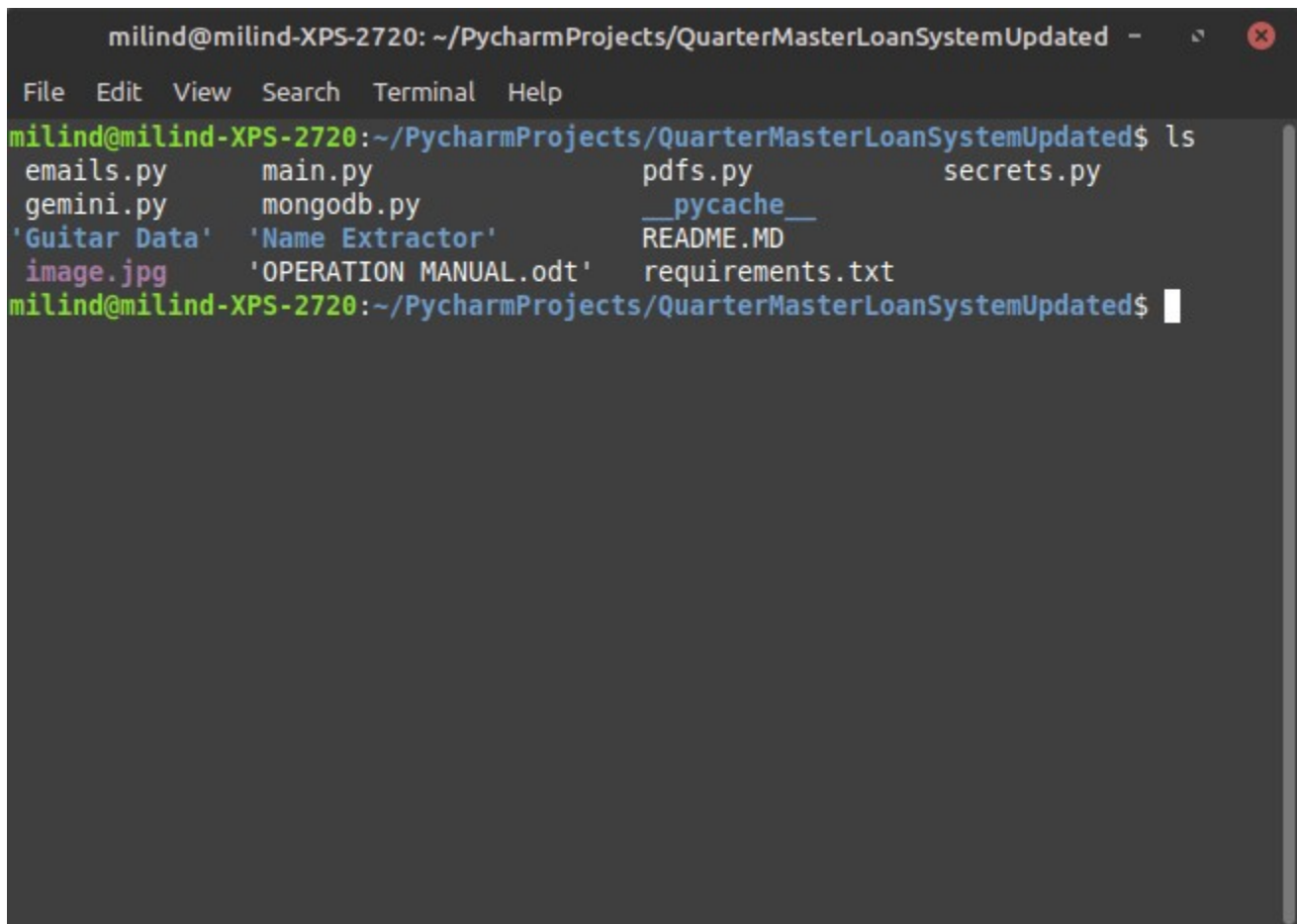
```
milind@milind-XPS-2720: ~/PycharmProjects/QuarterMasterLoanSystemUpdated - [X]
File Edit View Search Terminal Help
.2 in /usr/lib/python3/dist-packages (from httplib2<1.dev0,>=0.19.0->google-api-
python-client->google.generativeai->-r requirements.txt (line 2)) (2.4.7)
Collecting pyasn1<0.7.0,>=0.4.6
  Downloading pyasn1-0.6.0-py2.py3-none-any.whl (85 kB)
  85.3/85.3 KB 8.6 MB/s eta 0:00:00
Collecting grpcio-status<2.0.dev0,>=1.33.2
  Downloading grpcio_status-1.64.0-py3-none-any.whl (14 kB)
  Downloading grpcio_status-1.63.0-py3-none-any.whl (14 kB)
  Downloading grpcio_status-1.62.2-py3-none-any.whl (14 kB)
Installing collected packages: uritemplate, tzdata, typing-extensions, tqdm, pyt
hon-dateutil, pyasn1, protobuf, numpy, grpcio, dnspython, cachetools, annotated-
types, rsa, pypdf, pymongo, pydantic-core, pyasn1-modules, proto-plus, pandas, g
oogleapis-common-protos, pydantic, grpcio-status, google-auth, google-auth-http
lib2, google-api-core, google-api-python-client, google-ai-generativelanguage, go
ogle.generativeai
Successfully installed annotated-types-0.7.0 cachetools-5.3.3 dnspython-2.6.1 go
ogle-ai-generativelanguage-0.6.5 google-api-core-2.19.0 google-api-python-client
-2.134.0 google-auth-2.30.0 google-auth-httplib2-0.2.0 google.generativeai-0.7.0
googleapis-common-protos-1.63.1 grpcio-1.64.1 grpcio-status-1.62.2 numpy-2.0.0
pandas-2.2.2 proto-plus-1.24.0 protobuf-4.25.3 pyasn1-0.6.0 pyasn1-modules-0.4.0
pydantic-2.7.4 pydantic-core-2.18.4 pymongo-4.7.3 pypdf-4.2.0 python-dateutil-2
.9.0.post0 rsa-4.9 tqdm-4.66.4 typing-extensions-4.12.2 tzdata-2024.1 uritemplat
e-4.1.1
milind@milind-XPS-2720:~/PycharmProjects/QuarterMasterLoanSystemUpdated$
```

Fig 1.6: A successful module installation

Once the setup is all done, you may move on to Section 2, the operation of the app

Operation of the app – Normal mode

To operate this app as normal, there are some things to take note of. To quit the application anytime while running it, you may press the Control key (May be marked “Ctrl” or with the ^ symbol) and C. This will quit the app. However, you should only do this when the app is not doing anything. This means that the app is asking you for your input (which will be indicated by nothing new appearing, and your text cursor staying at one location). If you do this while the app is doing something (like after you press enter on an input field), the app will cancel all operations. Pasting with the normal keypresses of Control/Command and V will also not work. Instead, you will have to right click and select the option to paste or just right click. Finally, to run the app, start by entering **ls** or **dir** (depending on your system) to ensure that your terminal is configured correctly. The files should look similar to the output of the command as shown below, in Figure 2.1



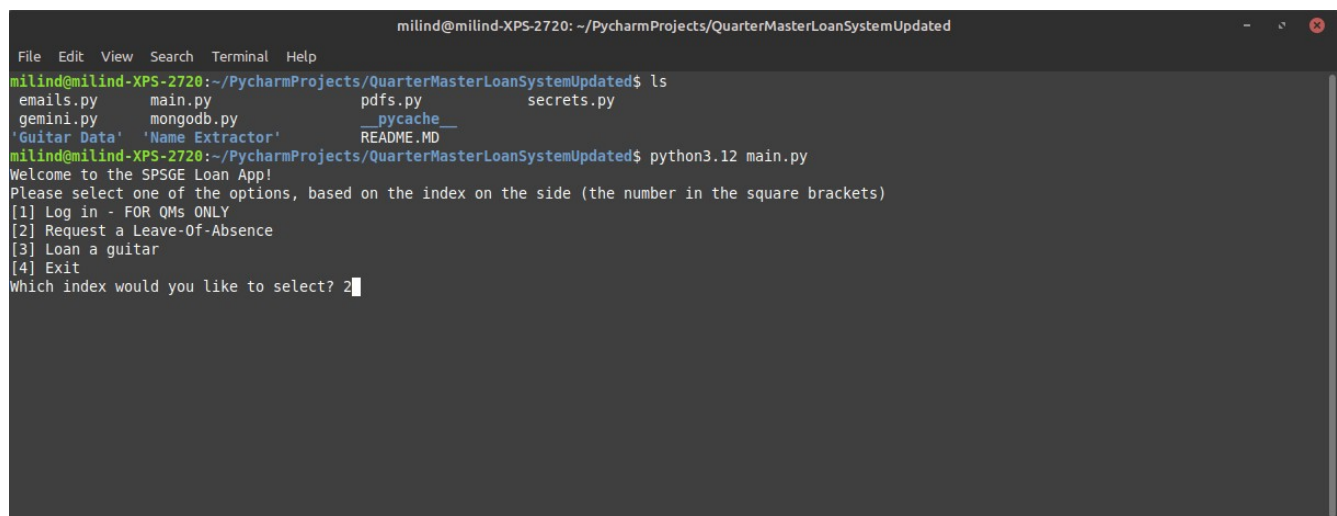
```
milind@milind-XPS-2720: ~/PycharmProjects/QuarterMasterLoanSystemUpdated - [X]
File Edit View Search Terminal Help
milind@milind-XPS-2720:~/PycharmProjects/QuarterMasterLoanSystemUpdated$ ls
emails.py      main.py      pdfs.py      secrets.py
gemini.py      mongodb.py  __pycache__
'Guitar Data' 'Name Extractor' README.MD
image.jpg      'OPERATION MANUAL.odt' requirements.txt
milind@milind-XPS-2720:~/PycharmProjects/QuarterMasterLoanSystemUpdated$
```

Fig 2.1: The output that should be shown. The colours will be slightly different, however the output will remain roughly the same for all computers.

If the result is not the same, please refer to Entering the folder on the terminal on Page 5. Once you have checked it, you may run `python3 main.py`, replacing `python3` with whatever your command that runs Python is. When running the app, the app will give you a couple of options, with a number written in square brackets (`[1]`, `[2]`, `[3]`, etc.). Do not enter the option name, always enter the numbers written in the square brackets.

Requesting a Leave-Of-Absence (LOA)

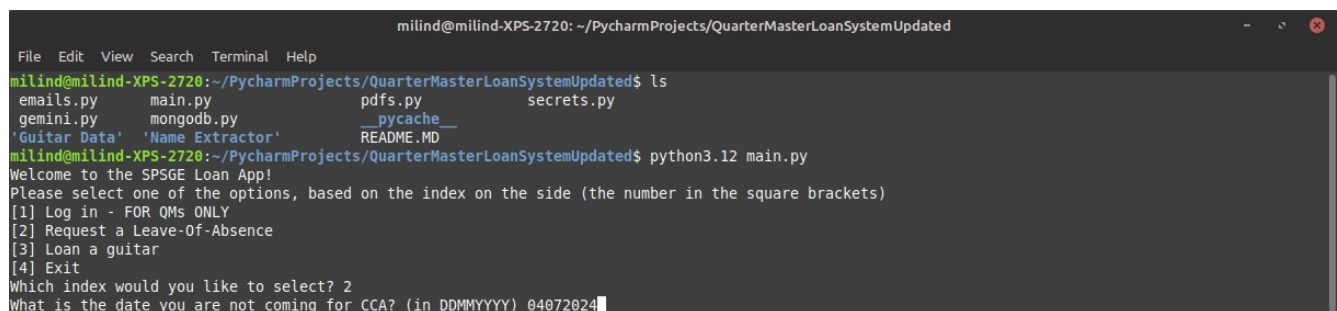
To request a Leave-Of-Absence from CCA, start by running the app. When you are asked what would you like to do (Fig 2.2), enter 2 and press the Enter key.



```
milind@milind-XPS-2720: ~/PycharmProjects/QuarterMasterLoanSystemUpdated
File Edit View Search Terminal Help
milind@milind-XPS-2720:~/PycharmProjects/QuarterMasterLoanSystemUpdated$ ls
emails.py      main.py        pdfs.py        secrets.py
gemini.py      mongodb.py    __pycache__
'Guitar Data' 'Name Extractor' README.MD
milind@milind-XPS-2720:~/PycharmProjects/QuarterMasterLoanSystemUpdated$ python3.12 main.py
Welcome to the SPSGE Loan App!
Please select one of the options, based on the index on the side (the number in the square brackets)
[1] Log in - FOR QMs ONLY
[2] Request a Leave-Of-Absence
[3] Loan a guitar
[4] Exit
Which index would you like to select? 2
```

Fig 2.2: Option 2 being entered.

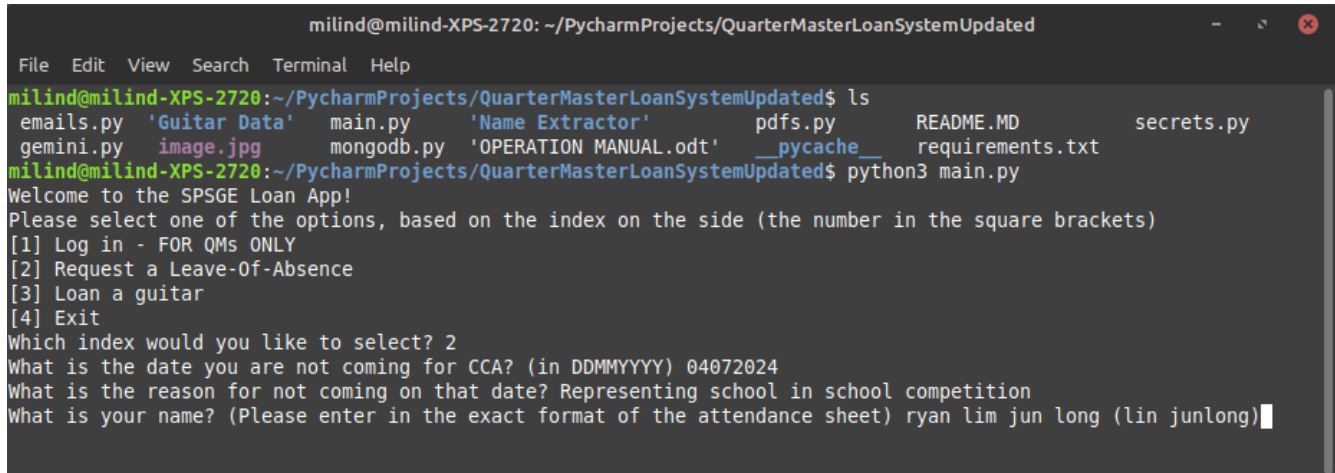
After this, enter the date you are not coming for CCA. This date should be in the DDMMYYYY format without any slashes. For example, if you are not able to come on 4th July 2024, enter 04072024 (as shown Fig 2.3).



```
milind@milind-XPS-2720: ~/PycharmProjects/QuarterMasterLoanSystemUpdated
File Edit View Search Terminal Help
milind@milind-XPS-2720:~/PycharmProjects/QuarterMasterLoanSystemUpdated$ ls
emails.py      main.py        pdfs.py        secrets.py
gemini.py      mongodb.py    __pycache__
'Guitar Data' 'Name Extractor' README.MD
milind@milind-XPS-2720:~/PycharmProjects/QuarterMasterLoanSystemUpdated$ python3.12 main.py
Welcome to the SPSGE Loan App!
Please select one of the options, based on the index on the side (the number in the square brackets)
[1] Log in - FOR QMs ONLY
[2] Request a Leave-Of-Absence
[3] Loan a guitar
[4] Exit
Which index would you like to select? 2
What is the date you are not coming for CCA? (in DDMMYYYY) 04072024
```

Fig 2.3: Date in the example being entered.

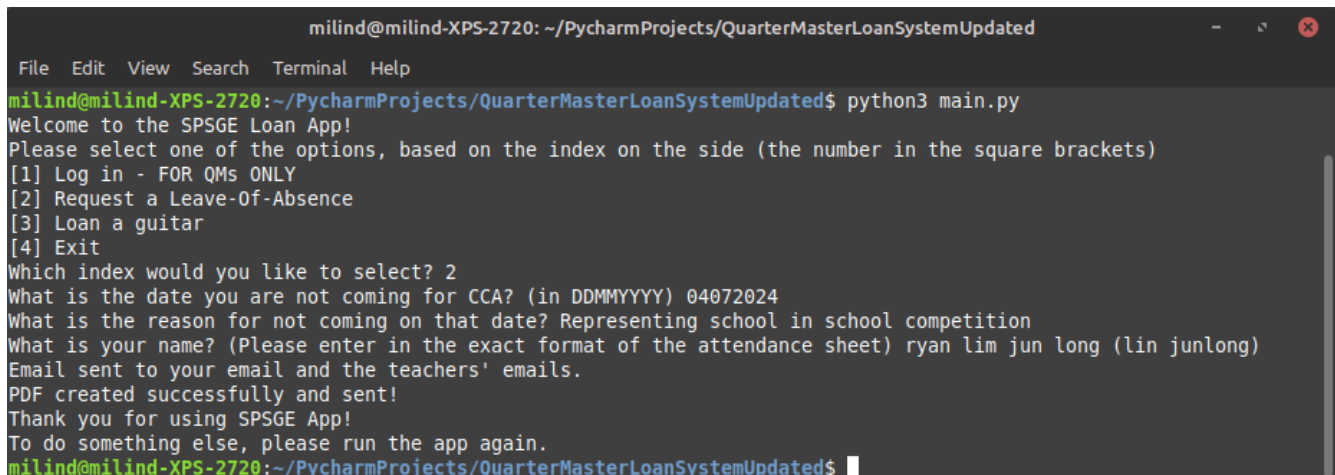
You will be then prompted to give a reason for not coming on that date. Enter this reason. Once you are done with that, enter your name, as it is in the attendance list. For example, if you are Ryan Lim, you will enter Ryan Lim Jun Long (Lin Junlong) in the field. This is not completely case-sensitive, as only the letters used matter, but you may enter your name in lower-case, as shown in Fig 2.4

A terminal window titled 'milind@milind-XPS-2720: ~/PycharmProjects/QuarterMasterLoanSystemUpdated'. The terminal shows the execution of 'ls' and 'python3 main.py'. The application prompts the user to select an option from a list: [1] Log in - FOR QMs ONLY, [2] Request a Leave-Of-Absence, [3] Loan a guitar, [4] Exit. The user selects option 2. The application then prompts for a date (DDMMYYYY), a reason for absence, and a name. The user enters '04072024', 'Representing school in school competition', and 'ryan lim jun long (lin junlong)'.

```
milind@milind-XPS-2720: ~/PycharmProjects/QuarterMasterLoanSystemUpdated
File Edit View Search Terminal Help
milind@milind-XPS-2720:~/PycharmProjects/QuarterMasterLoanSystemUpdated$ ls
emails.py  'Guitar Data'  main.py  'Name Extractor'  pdfs.py  README.MD  secrets.py
gemini.py  image.jpg      mongodb.py  'OPERATION MANUAL.odt'  __pycache__  requirements.txt
milind@milind-XPS-2720:~/PycharmProjects/QuarterMasterLoanSystemUpdated$ python3 main.py
Welcome to the SPSGE Loan App!
Please select one of the options, based on the index on the side (the number in the square brackets)
[1] Log in - FOR QMs ONLY
[2] Request a Leave-Of-Absence
[3] Loan a guitar
[4] Exit
Which index would you like to select? 2
What is the date you are not coming for CCA? (in DDMMYYYY) 04072024
What is the reason for not coming on that date? Representing school in school competition
What is your name? (Please enter in the exact format of the attendance sheet) ryan lim jun long (lin junlong)
```

Fig 2.4: Entering name

Finally, the application will end by not printing anything for a short while once you press enter. DO NOT QUIT THE APPLICATION THROUGH CONTROL + C. After which, an email will be sent to the teachers and the secretary about your Leave-Of-Absence on that day. You will exit Python at this point and written back to the original terminal, as shown in Fig 2.5

A terminal window showing the continuation of the application from the previous figure. It prompts for a date, reason, and name, which are entered. The application then sends an email, creates a PDF, and thanks the user. Finally, it returns to the system terminal prompt.

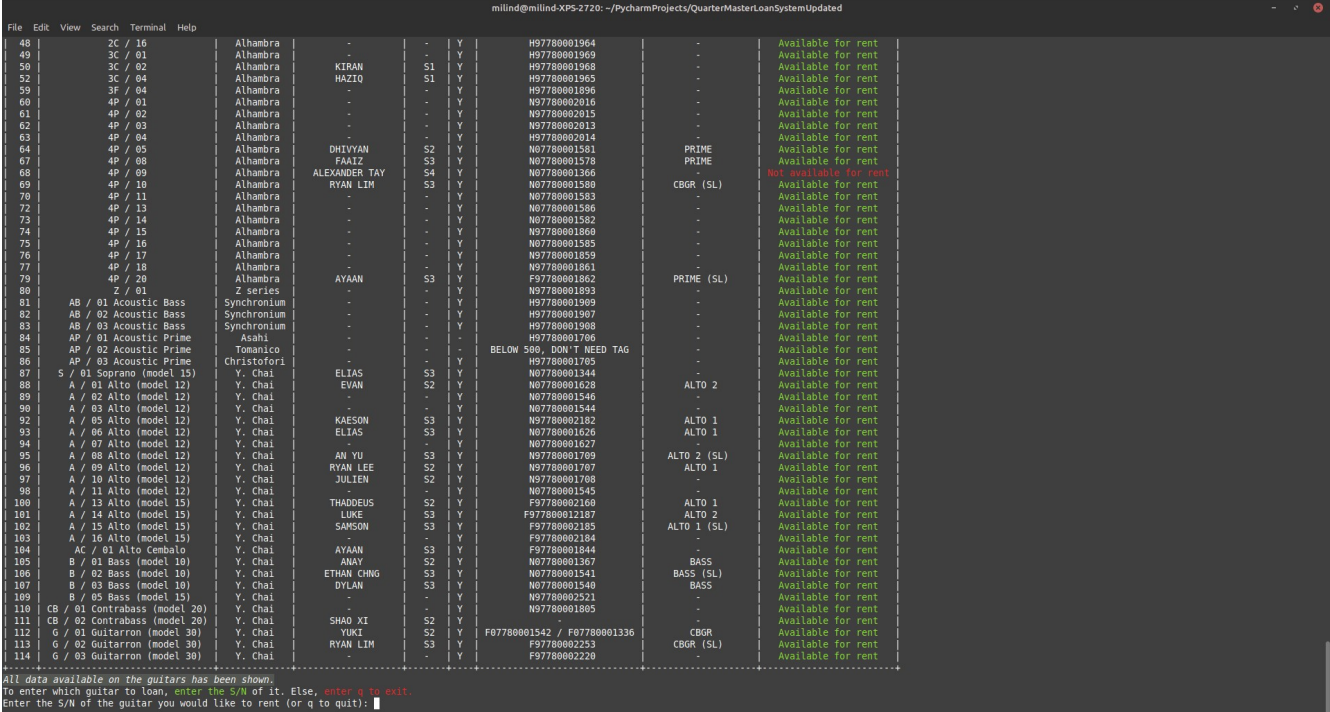
```
milind@milind-XPS-2720: ~/PycharmProjects/QuarterMasterLoanSystemUpdated
File Edit View Search Terminal Help
milind@milind-XPS-2720:~/PycharmProjects/QuarterMasterLoanSystemUpdated$ python3 main.py
Welcome to the SPSGE Loan App!
Please select one of the options, based on the index on the side (the number in the square brackets)
[1] Log in - FOR QMs ONLY
[2] Request a Leave-Of-Absence
[3] Loan a guitar
[4] Exit
Which index would you like to select? 2
What is the date you are not coming for CCA? (in DDMMYYYY) 04072024
What is the reason for not coming on that date? Representing school in school competition
What is your name? (Please enter in the exact format of the attendance sheet) ryan lim jun long (lin junlong)
Email sent to your email and the teachers' emails.
PDF created successfully and sent!
Thank you for using SPSGE App!
To do something else, please run the app again.
milind@milind-XPS-2720:~/PycharmProjects/QuarterMasterLoanSystemUpdated$
```

Fig 2.5: End of the programme, and returning back to the system terminal

You have successfully applied for your leave of absence on that day.

Loaning a Guitar

The process of loaning a guitar is similar to the process of applying for a Leave-Of-Absence. To start, run the application. Enter index **3** when asked about which index you would like to use. Enter your name, based on your attendance sheet. This step is the same as entering your name for the Leave-Of-Absence. Once you are done with this, resize your system terminal window to be full-screened. This is because a text-based table will be shown of all the guitars. Not all the results will fit, and you can use the scroll wheel to move up and down the table. (Fig 2.6).



Index	Guitar Type	Name	Status	Availability
48	3C / 01	Alhambra	Y	Available for rent
49	3C / 02	Alhambra	Y	Available for rent
50	3C / 04	Alhambra	Y	Available for rent
51	3F / 04	Alhambra	Y	Available for rent
59	4P / 01	Alhambra	Y	Available for rent
60	4P / 02	Alhambra	Y	Available for rent
61	4P / 03	Alhambra	Y	Available for rent
62	4P / 04	Alhambra	Y	Available for rent
63	4P / 05	Alhambra	Y	Available for rent
64	4P / 06	Alhambra	Y	Available for rent
65	4P / 07	Alhambra	Y	Available for rent
66	4P / 08	Alhambra	Y	Available for rent
67	4P / 09	Alhambra	Y	Available for rent
68	4P / 10	Alhambra	Y	Available for rent
69	4P / 11	Alhambra	Y	Available for rent
70	4P / 12	Alhambra	Y	Available for rent
71	4P / 13	Alhambra	Y	Available for rent
72	4P / 14	Alhambra	Y	Available for rent
73	4P / 15	Alhambra	Y	Available for rent
74	4P / 16	Alhambra	Y	Available for rent
75	4P / 17	Alhambra	Y	Available for rent
76	4P / 18	Alhambra	Y	Available for rent
77	4P / 19	Alhambra	Y	Available for rent
78	4P / 20	Alhambra	Y	Available for rent
79	4P / 21	Alhambra	Y	Available for rent
80	4P / 22	Alhambra	Y	Available for rent
81	4P / 23	Alhambra	Y	Available for rent
82	4P / 24	Alhambra	Y	Available for rent
83	4P / 25	Alhambra	Y	Available for rent
84	4P / 26	Alhambra	Y	Available for rent
85	4P / 27	Alhambra	Y	Available for rent
86	4P / 28	Alhambra	Y	Available for rent
87	4P / 29	Alhambra	Y	Available for rent
88	4P / 30	Alhambra	Y	Available for rent
89	4P / 31	Alhambra	Y	Available for rent
90	4P / 32	Alhambra	Y	Available for rent
91	4P / 33	Alhambra	Y	Available for rent
92	4P / 34	Alhambra	Y	Available for rent
93	4P / 35	Alhambra	Y	Available for rent
94	4P / 36	Alhambra	Y	Available for rent
95	4P / 37	Alhambra	Y	Available for rent
96	4P / 38	Alhambra	Y	Available for rent
97	4P / 39	Alhambra	Y	Available for rent
98	4P / 40	Alhambra	Y	Available for rent
99	4P / 41	Alhambra	Y	Available for rent
100	4P / 42	Alhambra	Y	Available for rent
101	4P / 43	Alhambra	Y	Available for rent
102	4P / 44	Alhambra	Y	Available for rent
103	4P / 45	Alhambra	Y	Available for rent
104	4P / 46	Alhambra	Y	Available for rent
105	4P / 47	Alhambra	Y	Available for rent
106	4P / 48	Alhambra	Y	Available for rent
107	4P / 49	Alhambra	Y	Available for rent
108	4P / 50	Alhambra	Y	Available for rent
109	4P / 51	Alhambra	Y	Available for rent
110	4P / 52	Alhambra	Y	Available for rent
111	4P / 53	Alhambra	Y	Available for rent
112	4P / 54	Alhambra	Y	Available for rent
113	4P / 55	Alhambra	Y	Available for rent
114	4P / 56	Alhambra	Y	Available for rent

Fig 2.6: All the guitars available for loans, displayed in a table.

Now, you may scroll through the whole list of loaned guitars. Any guitar that is marked as green, is a guitar available for rent. At this stage, you can enter q to exit Python safely, or you can enter the S/N (the number in the first column) of that guitar. For example, if I would like to rent the guitar G/03 Guitarron (Model 30) (the last guitar in the table), I can enter number 114 and press enter. The application will check again to ensure that it is available, and will ask you to confirm it with **[Y/n (to exit app)]**. This means that if you want to loan the guitar, you may enter **y**, which stands for Yes, or **n**, which stands for No. Should you choose to select no, the app will automatically quit itself. You will be prompted for your form class and your email address. Once you are

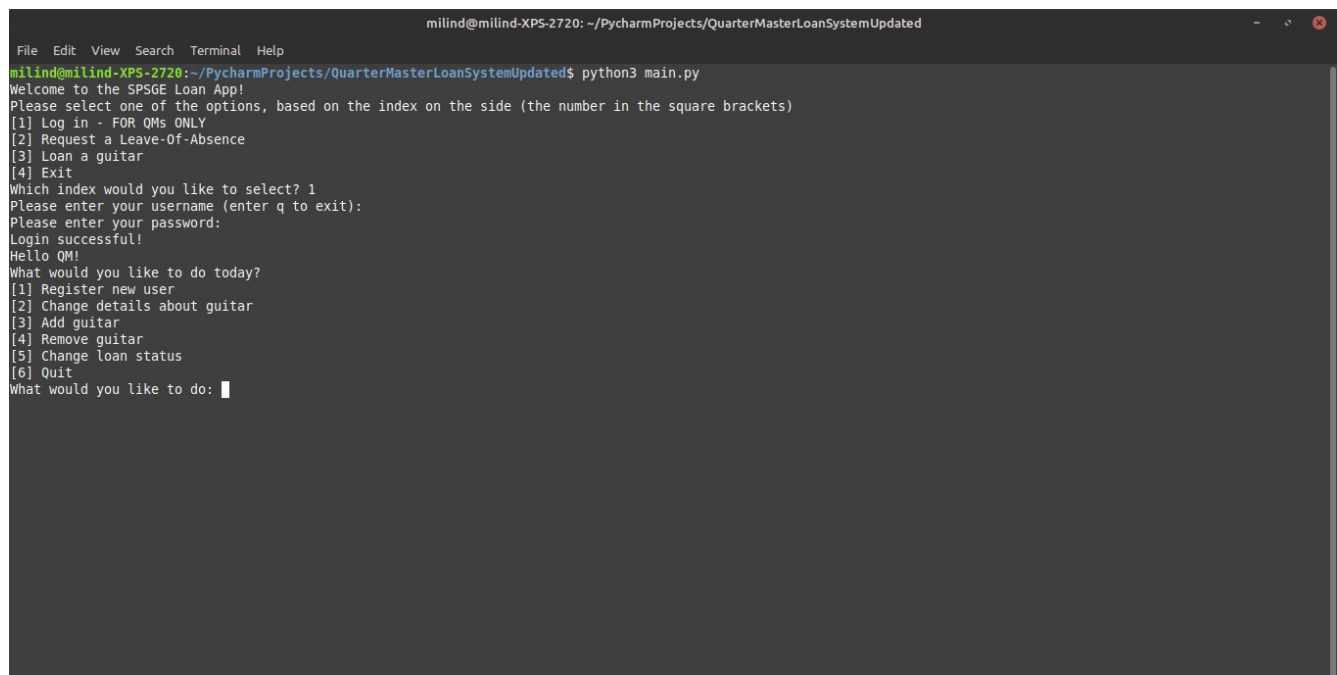
done with this, you have successfully loaned your guitar! The app will automatically exit safely once you are done.

Quartermaster Mode (QMs ONLY)

These are functions of the app that are only available for quarter masters. If you are not a quartermaster, you do not need to know anything other than you cannot use option [1] of the main app.

Entering the mode

To enter the mode, run the app as usual. Enter option 1 when you are prompted with what to do. At this stage, you will need your user ID and password ready. Enter this when prompted. When entering your user ID and password, you should just type normally. Although you have typed something on your keyboard, you will not be able to see anything in the system terminal. This is a completely normal behavior of the application and you do not need to be worried about it. This has been done for your privacy. To know whether you have successfully entered the mode, refer to Figure 3.1 and ensure that your system terminal output looks something along the lines of that:



```
milind@milind-XPS-2720: ~/PycharmProjects/QuarterMasterLoanSystemUpdated
File Edit View Search Terminal Help
milind@milind-XPS-2720:~/PycharmProjects/QuarterMasterLoanSystemUpdated$ python3 main.py
Welcome to the SPSGE Loan App!
Please select one of the options, based on the index on the side (the number in the square brackets)
[1] Log in - FOR QMs ONLY
[2] Request a Leave-Of-Absence
[3] Loan a guitar
[4] Exit
Which index would you like to select? 1
Please enter your username (enter q to exit):
Please enter your password:
Login successful!
Hello QM!
What would you like to do today?
[1] Register new user
[2] Change details about guitar
[3] Add guitar
[4] Remove guitar
[5] Change loan status
[6] Quit
What would you like to do: 
```

Fig 3.1: Successful entrance of the QM mode

Disclaimer about the current available functions

Currently, not all functions are available. These functions will be rolled out with updates over time. Currently, option numbers [2], [3] and [4] are currently not available. However, these will be soon available with updates. You will be informed about them by us soon.

Resetting Loan Status

Currently, this is the only major item available to the QM. To reset it, the steps are similar to loaning one. Select option number [5] in the QM mode and select the Serial Number (the S/N column) of the guitar when prompted to do so. From here, you will be asked to confirm that you are resetting this guitar. Once you are done with this, this guitar will be available to everyone else again for loans of the guitar.

Bug fix contacts

Should you have issues with the application at any point through the operation of it, you may contact the lead software engineer of this application at the details below:

LEAD SOFTWARE ENGINEER

Advait Contractor

advaitthepro@outlook.com

(click on the email above to send an email)