**Installation and Usage Guide for MP3 Player on Raspberry Pi**

**Step 1: Update Raspberry Pi OS**

Before installing the MP3 player, ensure your Raspberry Pi OS is up to date.

1. Open a terminal on your Raspberry Pi.
2. Run the following commands:

sudo apt update && sudo apt upgrade -y

**Step 2: Install Required Dependencies**

The MP3 player requires several Python libraries, including Tkinter for the GUI and Pygame for audio playback.

1. Install Python and required packages:

sudo apt install python3 python3-pip python3-tk -y

1. Install additional Python libraries:

pip3 install pygame mutagen

**Step 3: Download the MP3 Player Code**

1. Navigate to your preferred directory:

cd ~

1. Clone the repository (or download the script manually if it's not in a GitHub repo):

git clone https://github.com/Shamk74/ITP258.git

1. Navigate into the MP3 player directory:

cd ITP258/Project2/src/

**Step 4: Run the MP3 Player**

1. Ensure you are inside the directory where mp3\_player.py is located.

ls

Ensure you see mp3\_player.py in the list of files.

1. Run the MP3 player:

python3 mp3\_player.py

**Step 5: Using the MP3 Player**

Once the MP3 player GUI opens, follow these steps:

1. Click **"Load File"** to open a single MP3 file.
2. Click **"Load Folder"** to load multiple MP3 files from a directory.
   * You only need to select the folder the MP3 files are in it will shuffle between all MP3 files in the folder
3. Use **"Play"** to start playback.
4. **Pause, Stop, Rewind, and Fast Forward** functions are available.
   * Rewind and Fast Forward functions are in 5 sec intervals.
5. Adjust volume using the **Volume Slider**.
6. Click on the **progress bar** to jump to a specific part of the song.

**Step 6: Enabling Auto-Run on Startup (Optional)**

To have the MP3 player launch on boot:

1. Open the autostart configuration file:

nano ~/.config/lxsession/LXDE-pi/autostart

1. Add the following line at the end:

@python3 /home/pi/ITP258/Project2/src/mp3\_player.py

1. Save and exit (CTRL + X, then Y, then ENTER).
2. Reboot your Raspberry Pi:

sudo reboot

**Troubleshooting**

* If you get an error regarding missing modules, try reinstalling dependencies:

pip3 install --upgrade pygame mutagen

* If the audio doesn't play, ensure your Raspberry Pi's audio output is correctly set:

raspi-config

Navigate to System Options -> Audio and select the correct output (HDMI or 3.5mm jack).

* If the GUI does not appear, ensure you are running Raspberry Pi OS with a desktop environment.

**Conclusion**

You have successfully installed and run the MP3 player on your Raspberry Pi. Enjoy your music!