Red Light Green Light

This is the classic “Red Light, Green Light” game where one person is a virtual stoplight and gives commands to the other players to either stop or go.

Rules of play

- A player chosen as the stoplight announces, “Green Light!” and turns away from the other players.
- The other players move toward the stoplight player from a set starting distance, attempting to touch them.
- At any moment, the stoplight player can announce “Red Light!” and turn around to face the other players.
- If the stoplight player sees any players still moving after saying “Red Light!”, those players are called out and eliminated until a new game starts.
- The stoplight player continues repeating the “Red Light, Green Light” cycle.
- If a player manages to touch the stoplight player before they turn around after saying “Red Light!”, the roles change:
    - The current stoplight player moves back to the starting position.
    - The player who touched them becomes the new stoplight.
- The game continues until only the stoplight player remains.

Steps in the Game

- The game starts with an introductory screen.
- The webcam captures real-time video.
- The 'green light' and 'red light' phases alternate. - 'Green light': Player can move. - 'Red light': Player must stay still. Movement detection determines whether the player loses.
- The game ends either when the player wins (reaches the goal) or loses (excessive movement detected).

In this game we will use Python and other Python libraries to enforce these rules.

Let's get started!

Pre-Requirements:

Install Python and Visual Studio Code (VS Code)

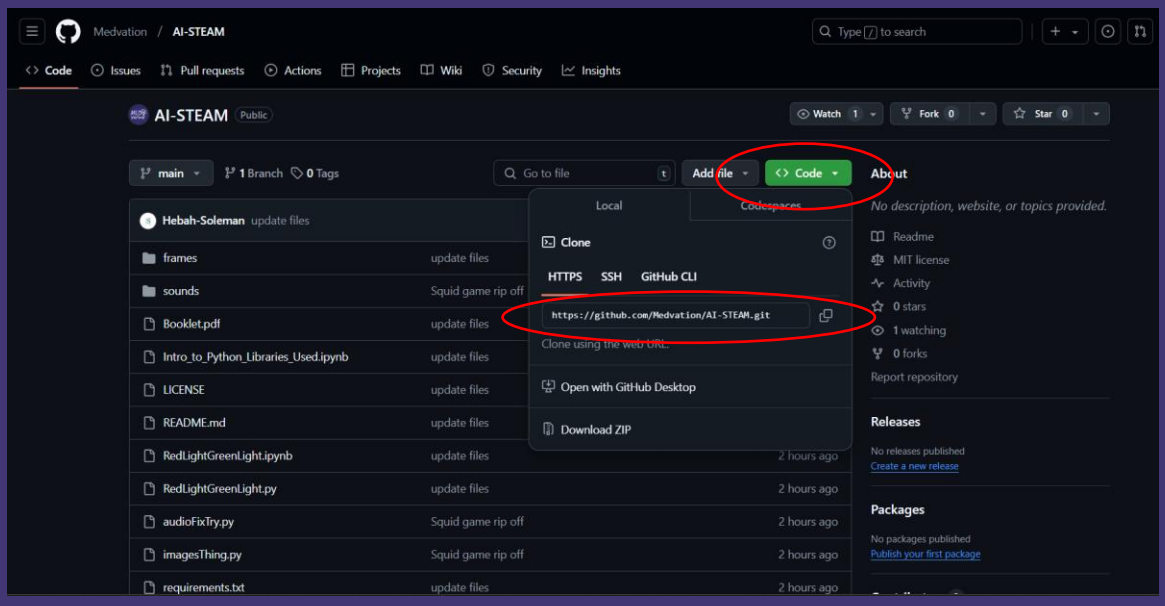
Instruction: https://youtu.be/r1nkXw8ffOk?si=uZtyKslusrFwnLL7

or

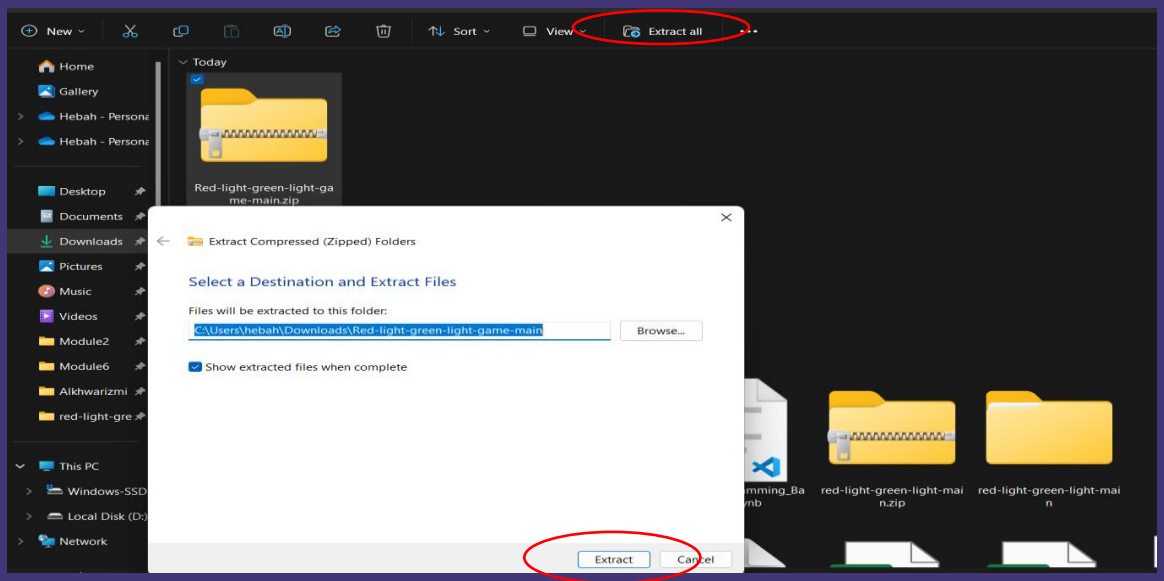
Install Python and Pycharm

Instruction: https://youtu.be/otfI90qwpiU?si=7psa1nIGZm_PIpcd

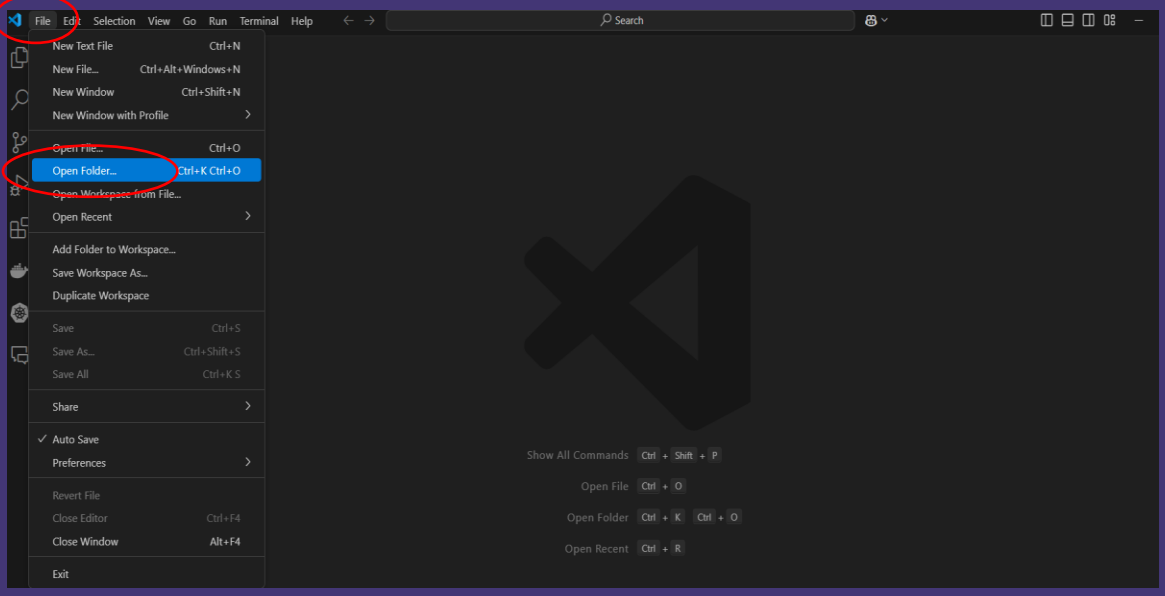
Step1: From the GitHub download the project



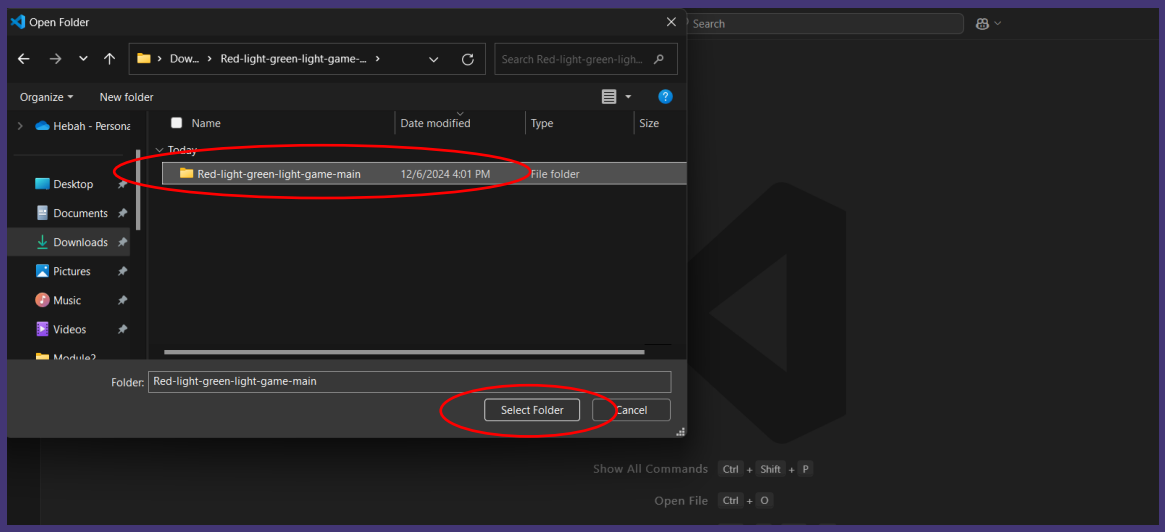
Step2: Extract files



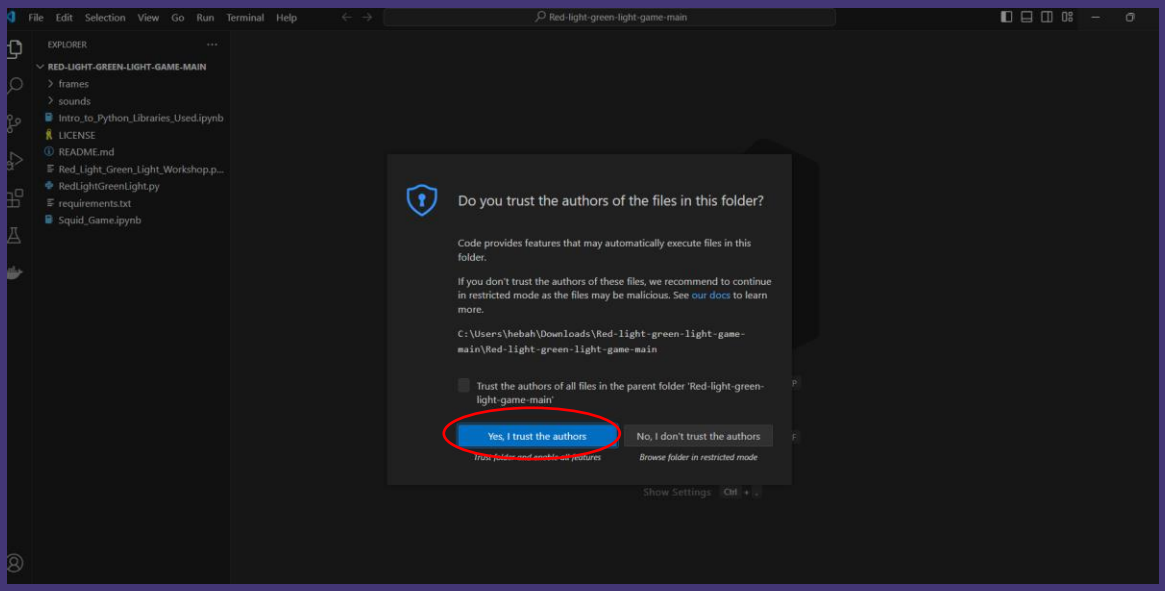
Step3: Open the project in VS Code



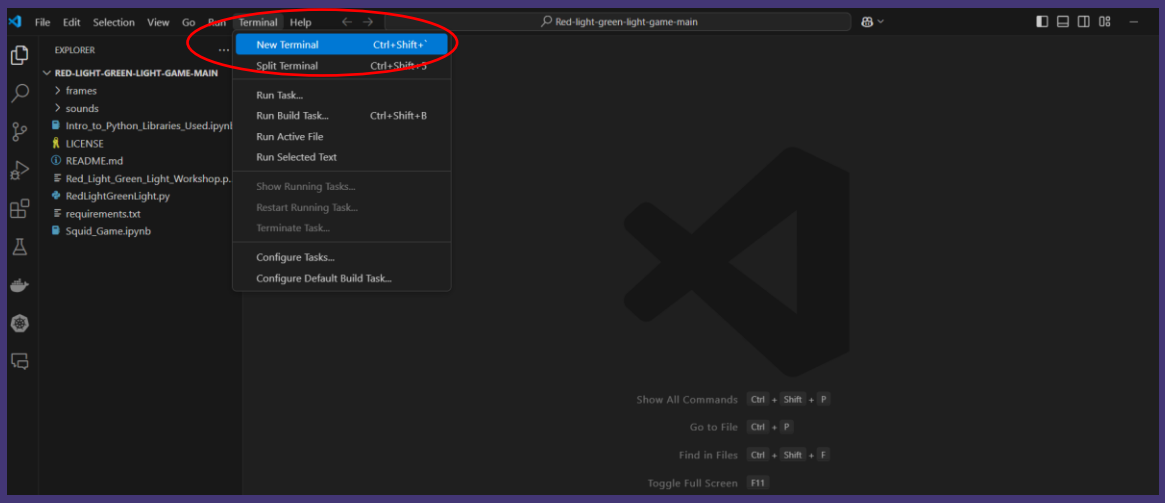
Step4: Select the folder where you save it



Step5: If this window appears, just click on “Yes, I trust the author”



Step6: Create a Python environment (Terminal→ New Terminal)



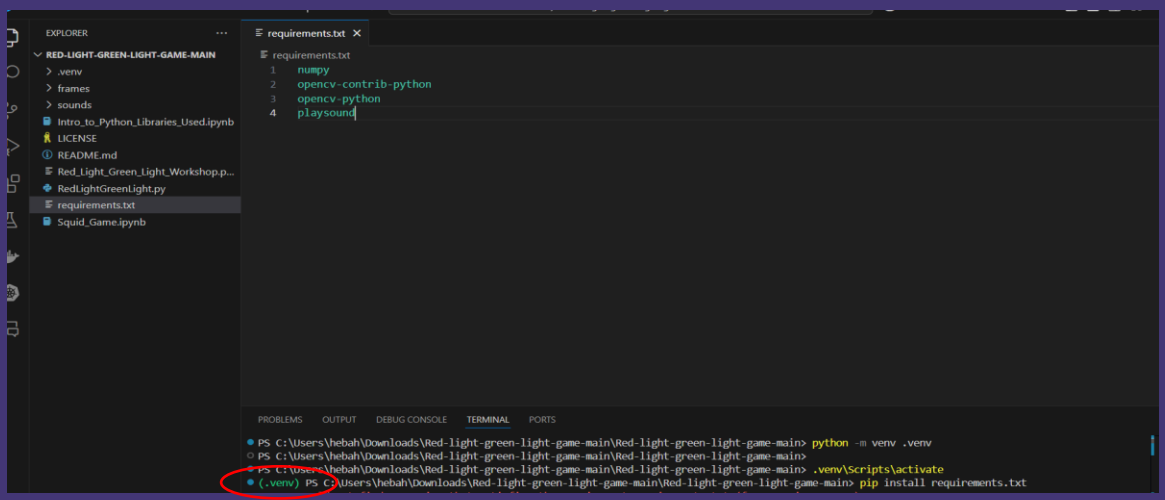
Now copy and paste these commands.

Creating a virtual environment

```
python -m venv .venv
```

Activate the environment

```
.venv\Scripts\activate
```

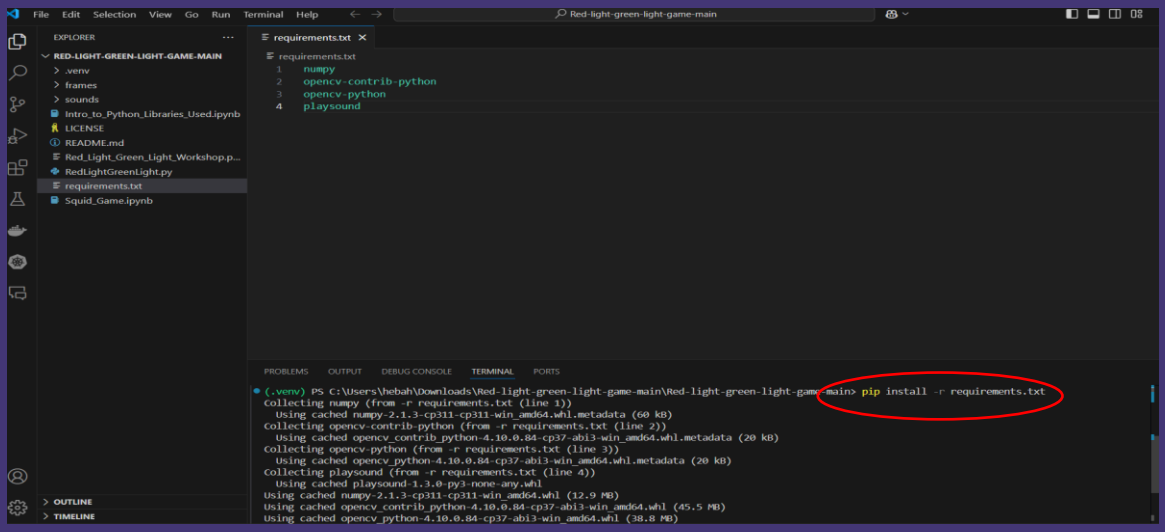


The word (.venv) will appear on the top pf the path

Step3: Install important libraries

Copy and paste this command

```
pip install -r requirements.txt
```

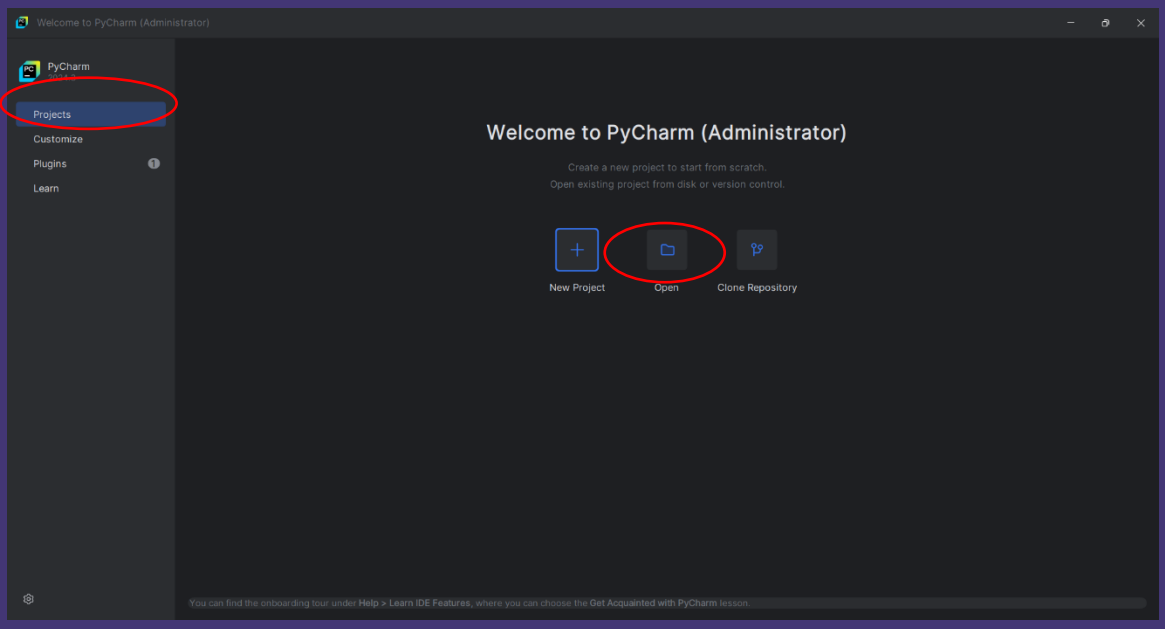


Step4: Run the game

Copy and paste this command

```
python RedLightGreenLight.py
```

Step3: Open the project in PyCharm



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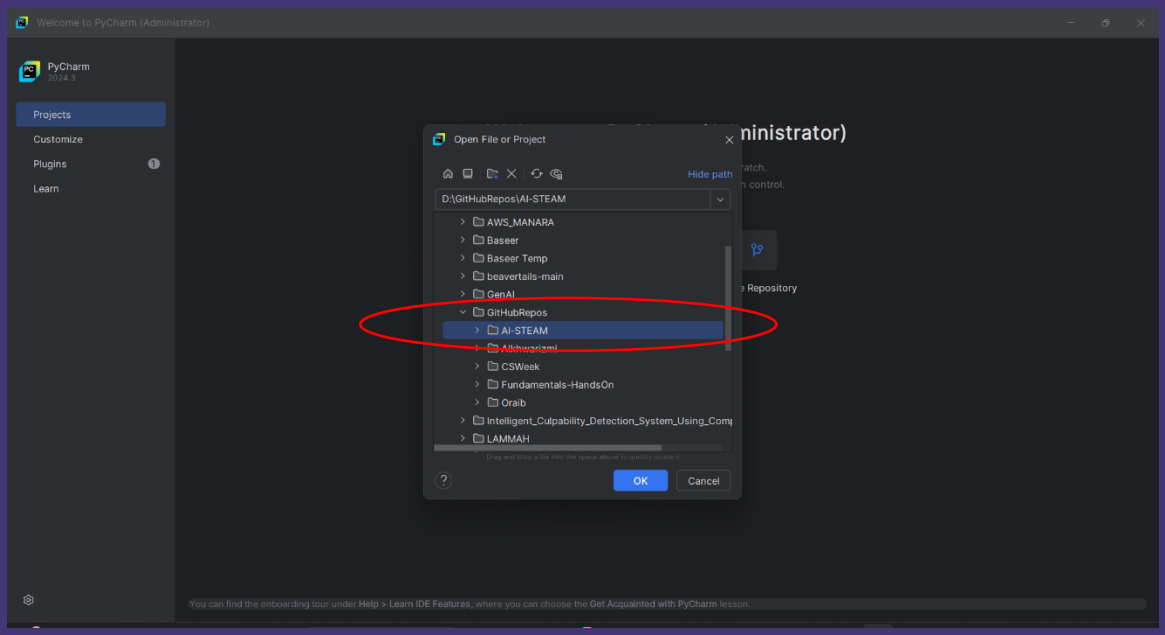

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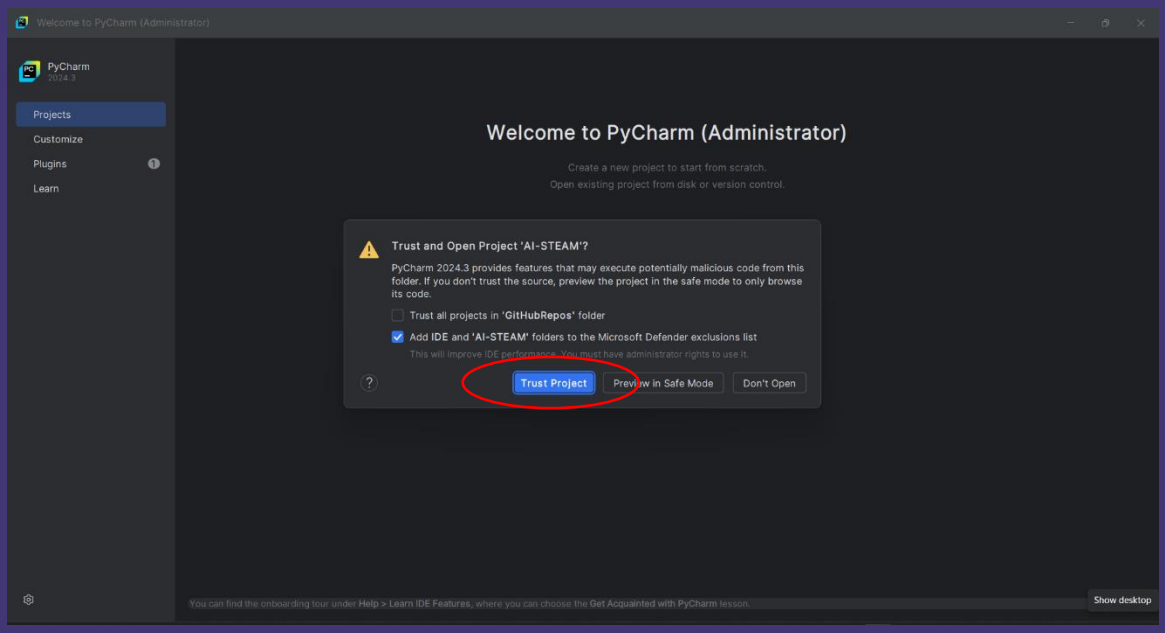
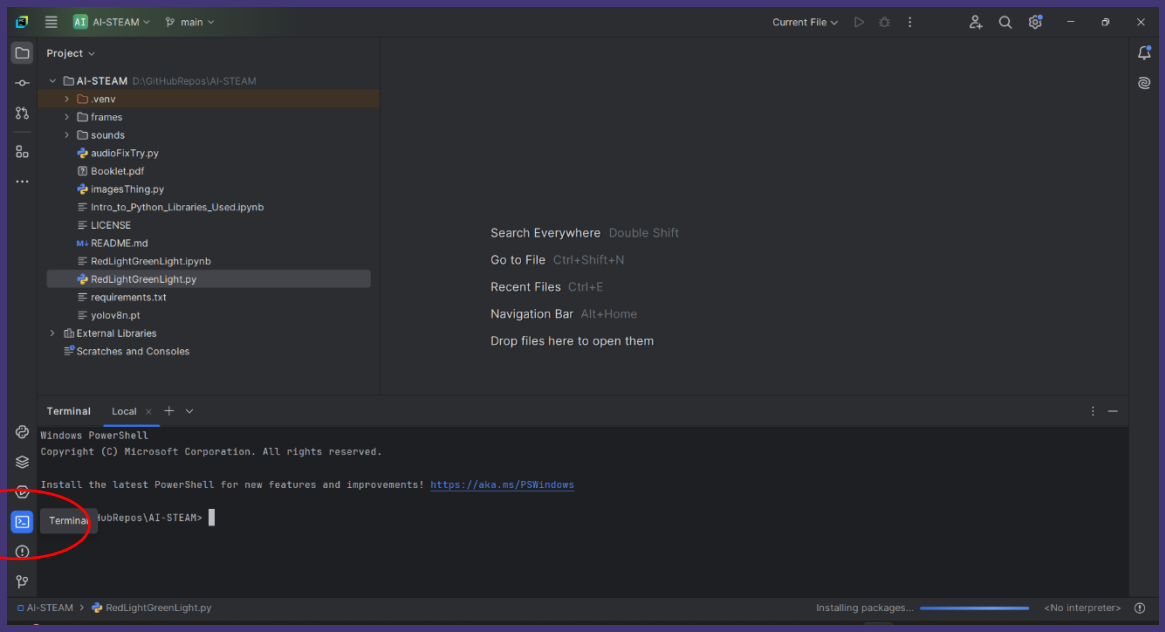


Step6: Create a Python environment (Terminal→ New Terminal)



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Windows:

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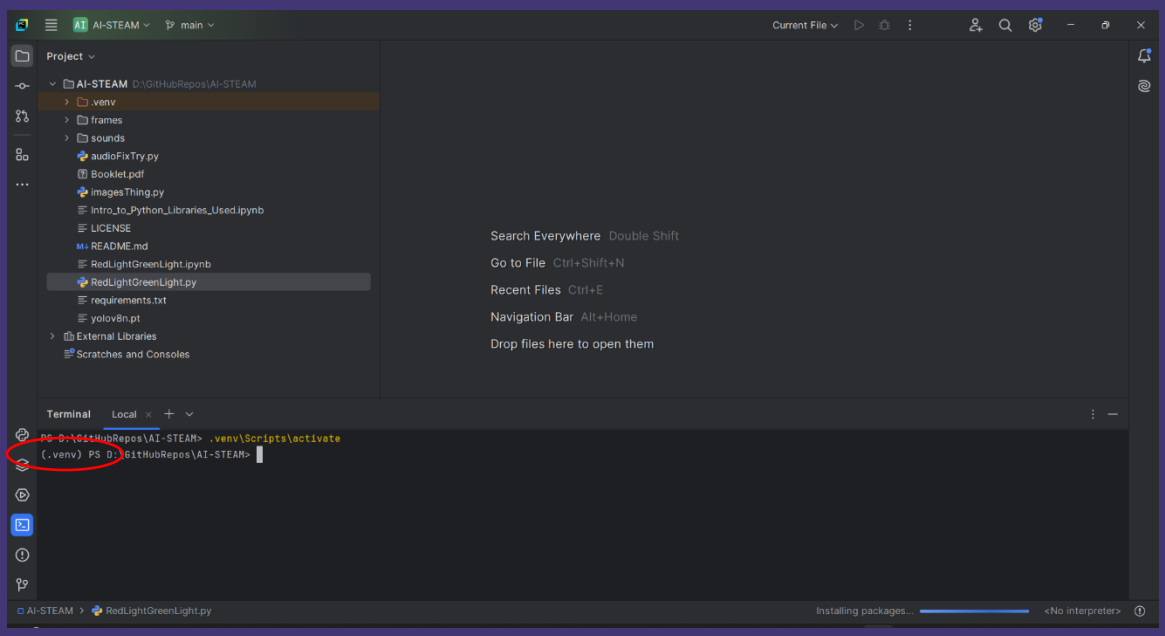

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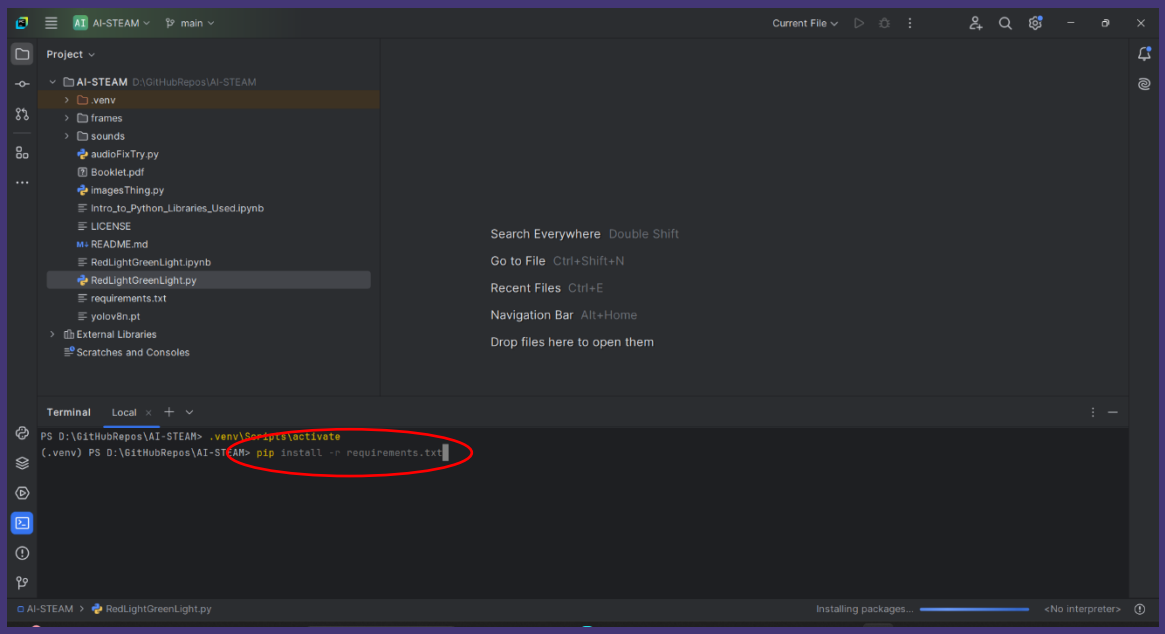

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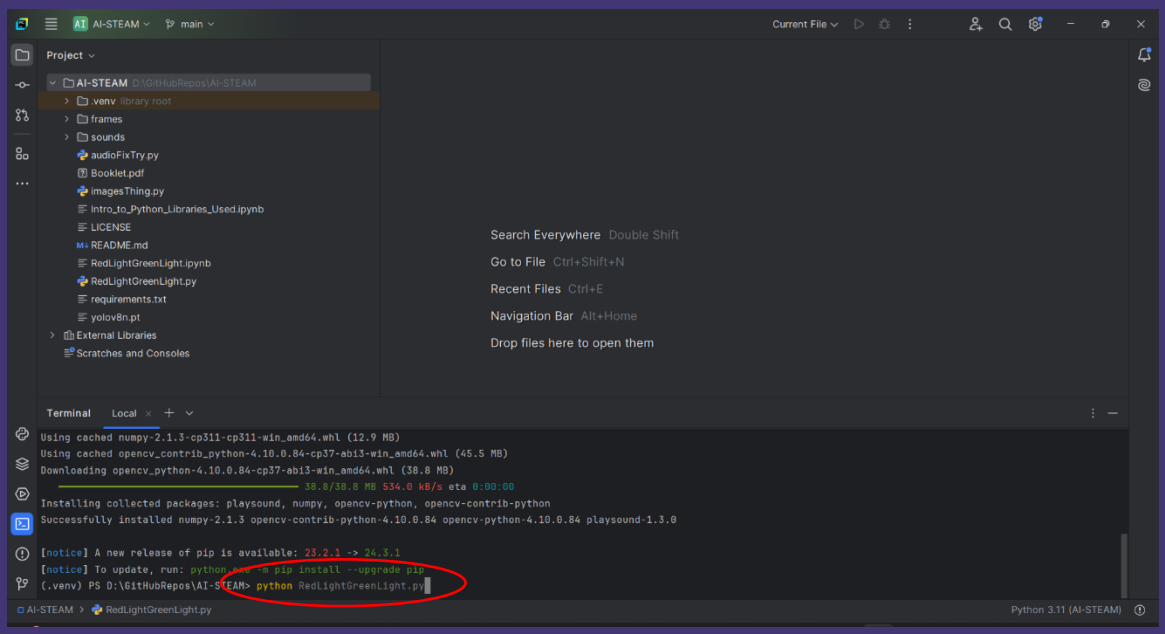

Enjoy!