

PYTHON ACP SET UP

Markdown

Hasa Leveling App: Setup and Installation Guide

🚀 Overview

Hasa Leveling is a gamified educational application built with Python using the **Tkinter** library for the graphical user interface. It incorporates **Pillow (PIL)** for image handling, **Pygame** for background music and sound effects, and **MySQL** for user profile and skill progress tracking.

This guide will walk you through setting up the required dependencies, configuring the MySQL database, and running the application.

📋 Prerequisites

Before running the app, ensure you have the following installed:

1. **Python 3.x**
2. **MySQL Server** (and MySQL running in the background)
3. **Required Python Packages**

1. Project Structure

Ensure your project directory is structured exactly as follows, with the `assets` folder containing all necessary images and audio files:

```
HasaLeveling/
├── HasaLeveling.py (The main application script)
├── assets/
│   ├── bgmusic.mp3 (Background music)
│   ├── clicksoundeffect.wav (Sound effect)
│   └── logoicon.png (Application icon)
```

- dashboard.png (Example background images, etc.)
- ... (All other PNG/JPG files used in the code)

2. Python Dependencies

Install the necessary Python libraries using `pip`.

```
```bash
Install the required packages
pip install tk pillow pygame mysql-connector-python

Check the installation
pip show tk (Note: tk is usually included with Python, but the others are external)
```

Package	Purpose
tk	Main GUI framework (usually built-in)
pillow	Image loading and manipulation
pygame	Audio playback (background music and sound effects)
mysql-connector-python	Database connection and interaction

### 3. MySQL Database Setup

The application connects to a MySQL database named hasaleveling\_db.

#### A. Configure Database Connection

Open HasaLeveling.py and modify the DB\_CONFIG dictionary with your local MySQL credentials:

Python

```
HasaLeveling.py (Around line 100)
```

```
--- DATABASE CONFIGURATION ---
```

```
DB_CONFIG = {
```

```
 "host": "localhost",
```

```
 "user": "root", # <-- CHANGE THIS if your user is different
```

```
 "password": "jayvee101", # <-- CHANGE THIS to your MySQL root password
```

```
 "database": "hasaleveling_db"
```

```
}
```

## B. Create the Database and Table

You need to execute the following SQL commands in your MySQL environment (using tools like MySQL Workbench, the command line, or an equivalent utility):

### 1. Create the Database:

SQL

```
CREATE DATABASE hasaleveling_db;
```

```
USE hasaleveling_db;
```

### 2. Create the User Progress Table:

SQL

```
CREATE TABLE user_progress (
```

```
 username VARCHAR(9) PRIMARY KEY,
```

```
 gender VARCHAR(10) NOT NULL,
```

```
 html_progress DECIMAL(3, 2) NOT NULL DEFAULT 0.10,
```

```
 cplusplus_progress DECIMAL(3, 2) NOT NULL DEFAULT 0.10,
```

```
 mysql_progress DECIMAL(3, 2) NOT NULL DEFAULT 0.10,
```

```
 python_progress DECIMAL(3, 2) NOT NULL DEFAULT 0.10,
```

```
 java_progress DECIMAL(3, 2) NOT NULL DEFAULT 0.10,
```

```
 -- Check constraint to ensure progress is between 0 and 1
```

```
CHECK (html_progress BETWEEN 0.00 AND 1.00),
CHECK (cplusplus_progress BETWEEN 0.00 AND 1.00),
CHECK (mysql_progress BETWEEN 0.00 AND 1.00),
CHECK (python_progress BETWEEN 0.00 AND 1.00),
CHECK (java_progress BETWEEN 0.00 AND 1.00)
);
```

---

## 4. Running the Application

Once the prerequisites, dependencies, and MySQL setup are complete, you can run the application from your terminal:

```
Bash
```

```
python HasaLeveling.py
```

## Troubleshooting

- **Database Connection Error:** If you get a connection error, verify that your MySQL server is running and that the credentials in the DB\_CONFIG dictionary (Step 3A) are correct.
- **"Warning: Asset not found:"** If you see this message in the console, it means an image or audio file listed in HasaLeveling.py (e.g., dashboard.png, revealbutton.png) is missing from the assets folder. The application will use a placeholder image, but you should source the correct asset for a proper experience.
- **Audio Issues:** If music/sound effects don't play, ensure the pygame installation was successful and that the audio files (bgmusic.mp3, clicksoundeffect.wav) are present in the assets folder.