

Python Developer Practical Test Assignment

Objective

Develop a Python application that turns the camera ON for a configurable duration, creates video clips at configurable time intervals, stores each clip in a folder, and saves clip-related metadata into a MySQL database. Total duration and interval must NOT be hardcoded. The solution must be developed using Python.

Functional Requirements

- The application must accept total recording duration (in minutes).
- The application must accept clip interval duration (in minutes).
- The camera should run for the provided total duration.
- A new video clip must be created at each interval.
- Each clip must store accurate start time, end time, and duration (in seconds).
- Database must be MySQL (mandatory).

File Storage Requirements

- All clips must be stored inside a folder named 'recordings/'.
- File naming convention: clip__.mp4

Database Requirements (MySQL)

Field Name	Type
id	Integer (Primary Key, Auto Increment)
clip_id	Integer
recording_date	Date
start_time	DateTime
end_time	DateTime
duration_seconds	Integer
file_name	Varchar
file_path	Varchar

AI Usage Policy

- Use of AI tools (ChatGPT, Copilot, etc.) is allowed.
- Candidate must clearly mention where AI assistance was used.
- Candidate should be able to explain the implemented solution during review.

Submission Requirements

- Share a GitHub repository link.
- Include a README with setup instructions.
- Explain how to run the application.
- Provide MySQL schema details.
- Mention any assumptions made.