General architecture of the project (database and facial recognition algorithm is within the raspberry pi):

Body Worn Cameras <-> Raspberry Pi (Central Server):

- Communication Type: Real-Time Streaming
- Protocols: RTSP (Real-Time Streaming Protocol) for video streaming/ RST Reliable Secure Transport .
- Data Flow:
    - Cameras continuously send video streams to the Raspberry Pi.
    - Raspberry Pi receives and processes the video frames for facial recognition.

Raspberry Pi (Central Server) - Facial Recognition Algorithm and Database:

- Communication Type: Internal Communication
- Protocols: Direct function/method calls, or internal API.
- Data Flow:
    - Facial recognition algorithm accesses the database directly within the Raspberry Pi.
    - The algorithm processes images and updates the database with new faces and labels.

Raspberry Pi (Central Server) <-> Display System (Smartphones/Tablets):

- Communication Type: Real-Time Updates and Data Retrieval
- Protocols: WebSocket for real-time updates, HTTP/HTTPS for general data retrieval.
- Data Flow:
    - The Raspberry Pi sends real-time updates to the display system using WebSocket (e.g., when a person of interest is identified).
    - The display system requests relevant data from the Raspberry Pi through HTTP/HTTPS.

User Interface for Database Management <-> Raspberry Pi (Central Server):

- Communication Type: Web Interface Communication
- Protocols: HTTPS for secure communication.
- Data Flow:
    - Officers interact with the user-friendly interface to add new cameras, new faces, and manage the database.
    - The user interface communicates with the Raspberry Pi to update the database and retrieve information.