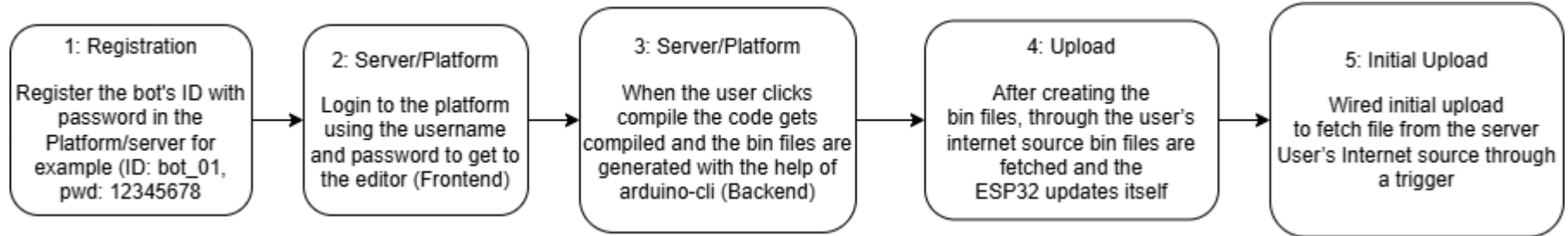


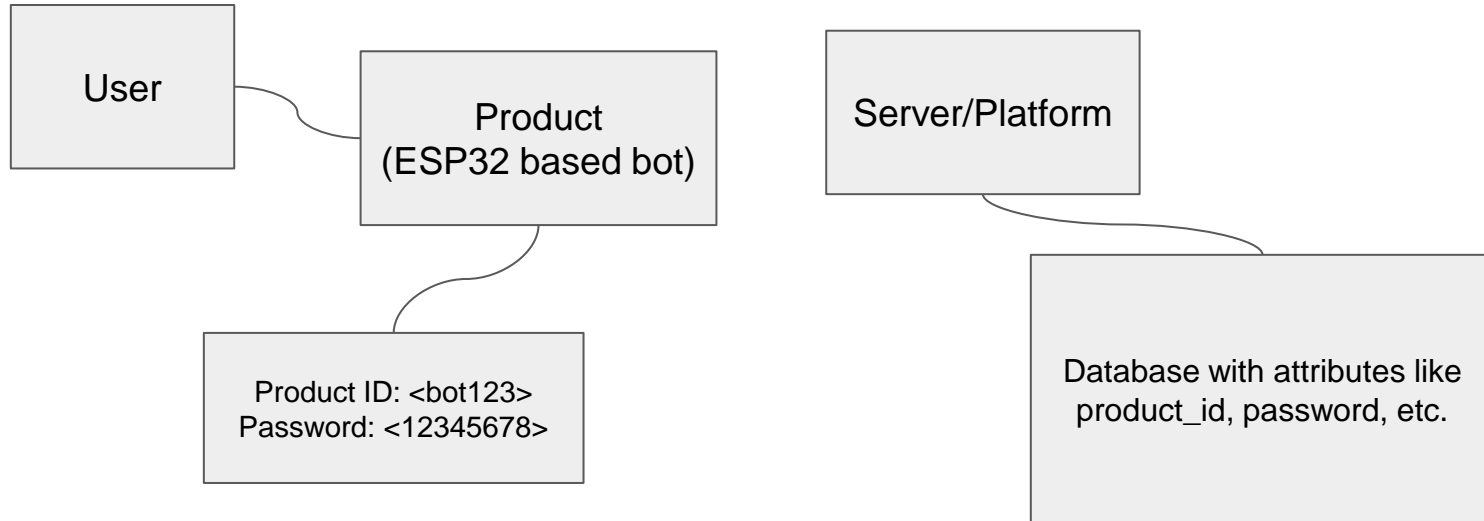
Process of OTA Updates through a website



This diagram outlines the workflow for uploading code to an ESP32 through a web platform. It starts with registering the bot's ID and password on the server. The user logs in, writes code in the editor, and clicks "compile" to generate `.bin` files using Arduino CLI. These files are then uploaded to the ESP32 over the internet, with an initial wired upload used to configure the device for future OTA updates. All of the steps are explained briefly in the upcoming parts.

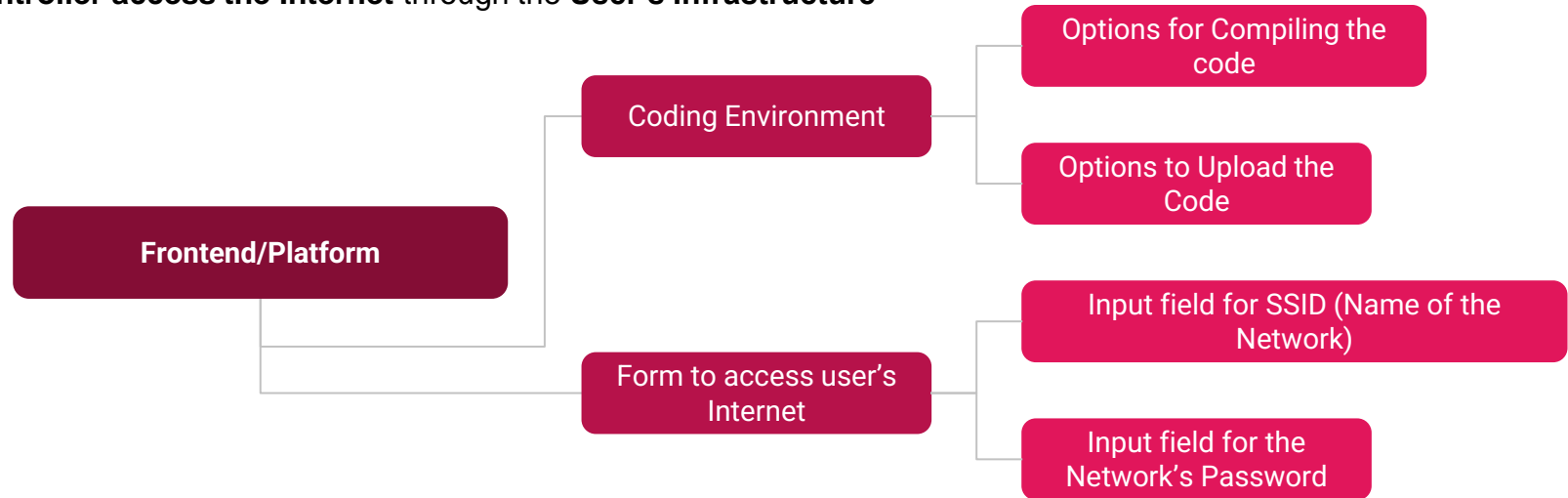
Step 1: User ID/Password (Authorisation)

- Get the products ID, Password for further process
- Register it on the Platform
- For example if the bot's name is "bot_001" and its password is "12345" register it on the platform and login



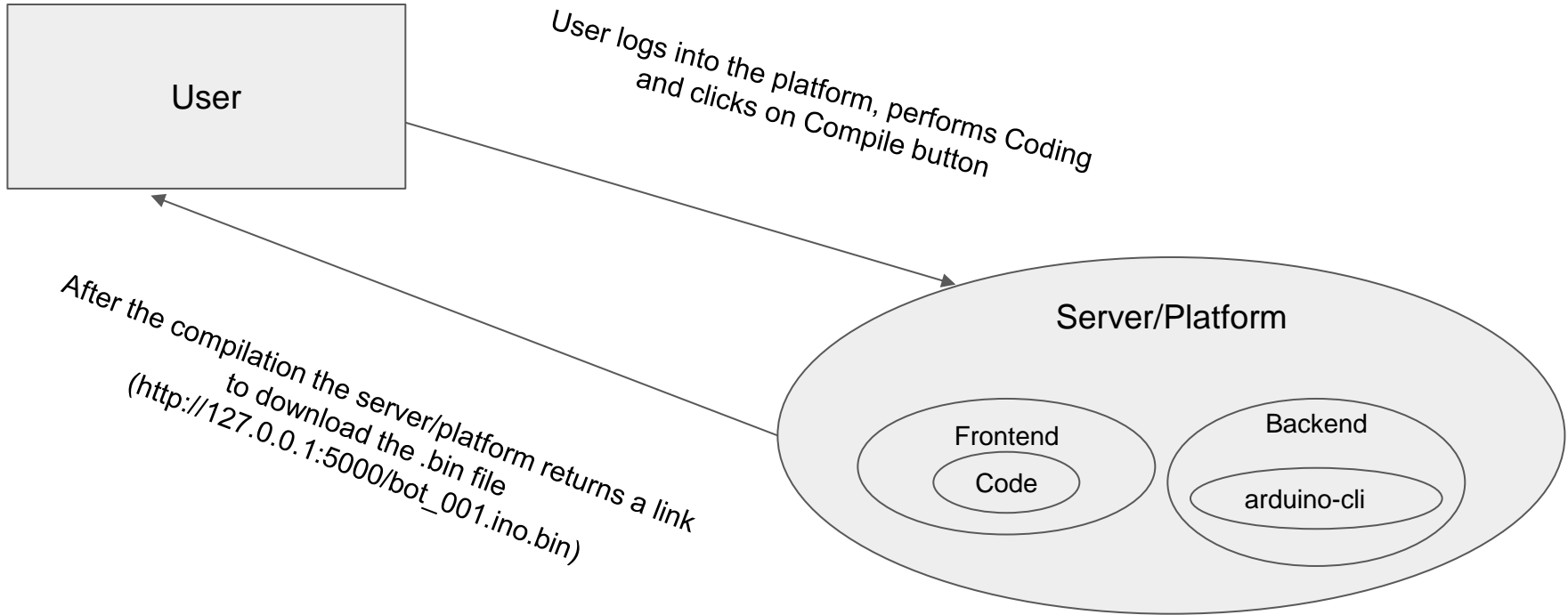
Step 2: Platform/Frontend

- Use the registered User ID/Password in the appropriate platform and get into the programming environment
- In this environment there will be a space for coding and stuff also a form to get the access user's **Internet**
- For example if the robot's name is "bot_001" and its password is "12345" register it on the platform and login to the platform
- Also in the platform there will be a form to get the **User's Internet access**, for the purpose of making the **micro controller access the Internet** through the **User's Infrastructure**



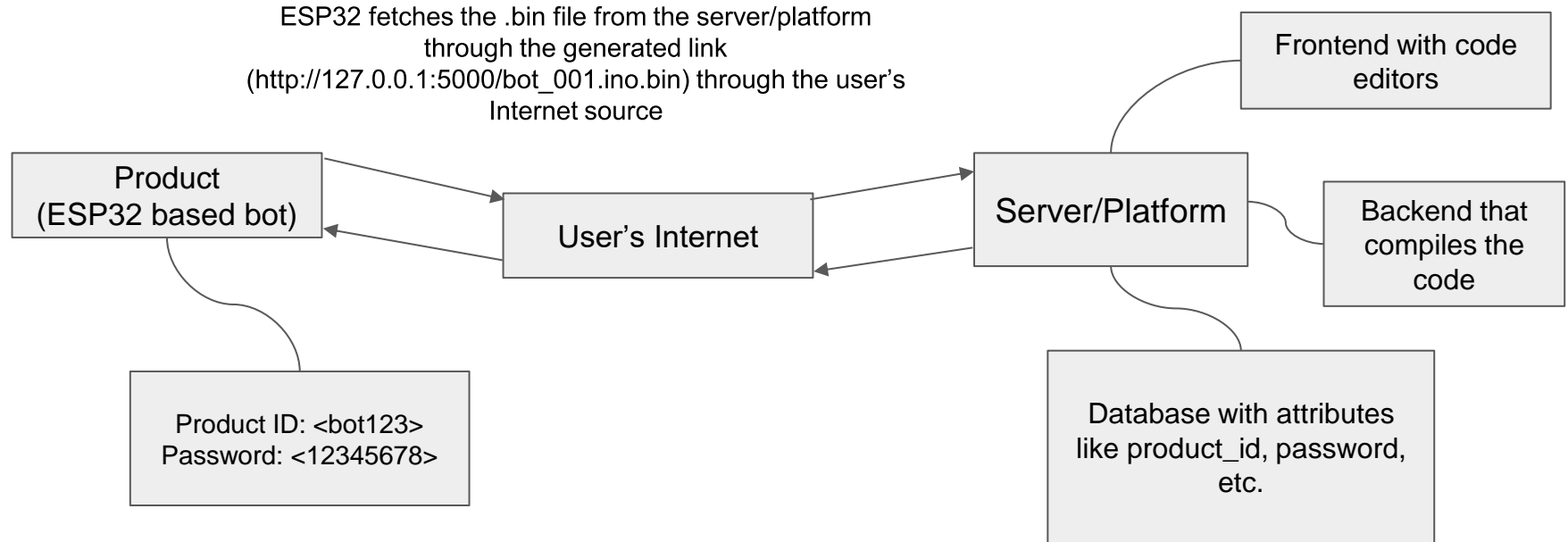
Step 3: Backend Process

- After authenticating into the platform with the User ID/Password the user will enter into the Coding Environment
- Then the code will be sent from the frontend to the backend through **requests**
- After the the backend will compile the code using the arduino-cli and will generate the link to fetch from the server/platform



Step 4: Uploading code to the Board

- After getting the **download link**, which will be **static** for every User
- Then the ESP32 accesses the internet via the User's internet source and fetches the .bin file from the server using the link that was generated previously using the credentials that we got before



Important Step: Setup the Firmware

- This is the first and the foremost step, to upload the code to the ESP32 with the User's Internet source and the static download link for the .bin file
- Once done press the trigger button to fetch the code from the internet to upload the firmware

