

# Input Validation Project

**Name:** Prem Krishna Shankar

**Student ID:** 1002164246

## Docket Implementation and Execution Instruction

**Docker Build:** cd into the project directory containing the Dockerfile and build the Docker image using:

*docker build -t phonebook-app .*

**Run Application:** Start the application on port 5000:

*docker run -p 5000:5000 phonebook-app*

**Postman API Setup:** Access the endpoints use the run the flask application and use the JWT token to access the endpoints.

**Set the Flask App:** set FLASK\_APP=main.py

Python -m flask run

Install the packages in requirements.txt

## Endpoints

/PhoneBook/login (POST) – To generate JWT token

/PhoneBook/list (GET) – To view the list of names and phone numbers.

/PhoneBook/add (POST) – To add details to the database

/PhoneBook/deleteByPhone (PUT) – To delete details by phone number

/PhoneBook/deleteByName (PUT) - To delete details by name

**Database:** SQLite 3 database is used for this project to store the name and phone number values.

**Authentication:** JWT token is implemented using Python Flask application.

You have to obtain JWT token by using /PhoneBook/login (POST) method.

## **Stack Used**

Python: Multipurpose programming language with rich library collection

Flask: A python microframework used to build Api's

Sqlalchemy: SQL alchemy is a popular SQL toolkit and ORM for python. It provides a set of high-level APIS to work with relational databases.

Postman: A tool to test the end points output and helps with API development.

## **Test cases**

There are 9 test cases written for the program.

These can be found in **test\_cases.py** file.

The conftest.py file is used as a prerequisite to get all the token and pass it to test\_cases.py file.

Run the testcases:

**Install the pytest module:** pip install pytest

**Run the test cases:** Python -m pytest

## **Assumptions**

- 1) Predefined users are set up with roles.
- 2) JWT token is valid for 24 hours

## **Pros**

- 1) Input validation supports all the inputs
- 2) Automated testing is done
- 3) Error and exception handling is done

## **Cons**

- 1) Username and password are predefined.