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The goal of the task is to build a simple backend application that accepts valid German license plates, stores them in a database and provides an endpoint to retrieve all stored plates. Secondly, we want to build a similarity search over the database .

The app should be written in Python 3, using the Flask web framework and SQLAlchemy as ORM. Please, add also Unit tests to the project and pack it in a docker componse.

These are the two endpoints to store and retrieve the data:

`POST /plate`

The endpoint accepts a plate, checks if it is a valid German plate and if so stores the plate with the current timestamp in the database.

```
Body:
{
      “plate”: “M-PP123”
}
```

Return values:

`200` if the plate is valid

`400` if the request is malformed (e.g. plate field in json is missing)

`422` if the plate is not a valid German plate

Please validate the license plate. The format is the following

- 1 to 3 characters before the hyphen (**M**-AA123)
- 1 or 2 characters after the hyphen (M-**AA**123)
- A maximum 4 digits number in the end (can’t start with a 0) (M-AA**123**)

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GET /plate

Returns all plates in the database with their corresponding timestamp

Response:

```
[
{
      “plate”: “M-PP123”,
      “timestamp”:  “2020-09-18T13:21:21Z”
},
{
      “plate”: “K-A123”,
      “timestamp”:  “2020-09-18T14:21:21Z”
}
]
```

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After we stored the license plate we want to build an endpoint to search the database :

GET /search-plate?key=ABC123&levenshtein=1

The endpoint returns all license plate which have a levensthein distance which is less or equal than the one provided in the query (**levenshtein**) to a search key (**key)**. We don't care about hyphen in the license plates.

Response:

```
{
      "ABC123":
      [
            {
                  "plate": "ABC123",
                  "timestamp":  "2020-09-18T13:21:21Z"
            },
            {
                  "plate": "ACC123",
                  "timestamp":  "2020-09-18T14:21:21Z"
            },
            {
                  "plate": "ACC123",
                  "timestamp":  "2020-09-18T12:11:21Z"
            }
      ],

}
```