**Design, Development of FastAPI Application**

**Procedure:**

1. Install dependencies
2. Imports Libraries
3. Create App
4. Configure CORS to access API from anywhere
5. Write Index Route - API for Hello World
6. Run App
7. Add addl. Web API Methods - Predict House Price API using
   1. GET Method
   2. POST Method
8. Run FastAPI App
9. Test FastAPI using
   1. FastAPI Swagger API - <http://127.0.0.1:8000/docs>
   2. Web Browser - [127.0.0.1:8000](http://127.0.0.1:8000/)

# 1. Install uvicorn and fastapi

# pip install fastapi uvicorn

# 2. Imports Libraries

import uvicorn

from fastapi import FastAPI

from fastapi.middleware.cors import CORSMiddleware

import pickle

# 3. Create App

app = FastAPI()

# 4. Configure CORS to access API from anywhere

app.add\_middleware(

    CORSMiddleware,

    allow\_origins=["\*"],

    allow\_credentials=True,

    allow\_methods=["\*"],

    allow\_headers=["\*"],

)

# 5. Index Route – API for Hello World, opens automatically on http://127.0.0.1:8000

@app.get('/')

def index():

    return {'message': 'Hello World'}

# 6. Run App

if \_\_name\_\_ == '\_\_main\_\_':

    uvicorn.run(app, port=8080, host='0.0.0.0')

# 7a. Using GET Method

@app.get("/predictPrice")

def getPredictPrice(Area: int, BedRooms: int, BathRooms: int):

    rgModel = pickle.load(open("reg.pkl", "rb"))

    prediction = rgModel.predict([[Area,BedRooms,BathRooms]])

    return {

        'Price': prediction[0]

    }

# 7b. Using POST Method

from pydantic import BaseModel

class house(BaseModel):

    Area: int

    BedRooms: int

    BathRooms: int

@app.post("/predict")

def predictHousePrice(data: house):

    rgModel = pickle.load(open("reg.pkl", "rb"))

    data = data.dict()

    prediction = rgModel.predict([[data["Area"],data["BedRooms"],data["BathRooms"]]])

    return {

        'Price': prediction[0]

    }

# 8. Run the API with uvicorn with Reload Option - Auto Run after edit source code

# uvicorn app:app --reload

# 9. Test API from Web Browser

# http://127.0.0.1:8000/predictPrice?Area=1400&BedRooms=3&BathRooms=3