Q) How you deploy API on aws? with example and use case?

→ Deploying API on Aws means making your code available on internet so other can use it.

* use case :- (weather API)

• steps to deploy API on AWS :-

(1) write API code :- (copy code)

(1) use python and FastAPI (a simple frame work for building API's)

(2) save this code as app.py :

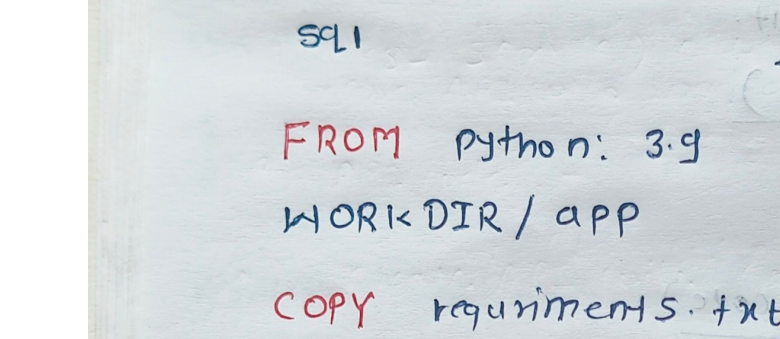
```
from fastapi import FastAPI

app = FastAPI()
@app.get ("/weather")
def get_weather ():
    return {"temperature": "25°C", "condition": "sunny"}
```

(3) This API returns a JSON response with temperature and weather conditions.

(B) Create a Docker Image :-

(1) create docker file.



(2) Build & test your Docker container

(C) Push the Docker Image to AWS (ECR) :-

(1) Store docker image into elastic container registry (ECR)

(2) Then use AWS CLI commands :-

```
aws ecr create-repository
aws ecr get-login-password | docker login
docker tag weather-api <your-ecr-url>/weather-api
docker push <your-ecr-url>/weather-api
```

(C) Deploy to AWS ECS (Elastic container service) :-

(1) Create a new ECS cluster in AWS

(2) Define Task defination to run container.

(3) Create a service to keep the API running.

(D) Expose API using AWS API Gateway :-

(1) Go to "API Gateway" in AWS

(2) Create a new "REST API"

(3) connect it to your ECS service.

(4) Deploy it and get a public URL

, "8000"]

(E) After deployment Aws give you URL :-

https://your-api-id.execute-api.region.amazonaws.com/weather

using this URL anyone can check weather condn

* Why use Aws for API deployment ?

(1) ~~Stati~~ scalability :- To handled high traffic

(2) security - protect data with authentication.

(3) cost effective - pay only ~~use~~ you ~~do~~ according to no. of hrs that you can use it.