Databases

- Application uses databases to persist data.

dev

Java Application
[UI]

database

all this need.

user : create stuffs
delete
update
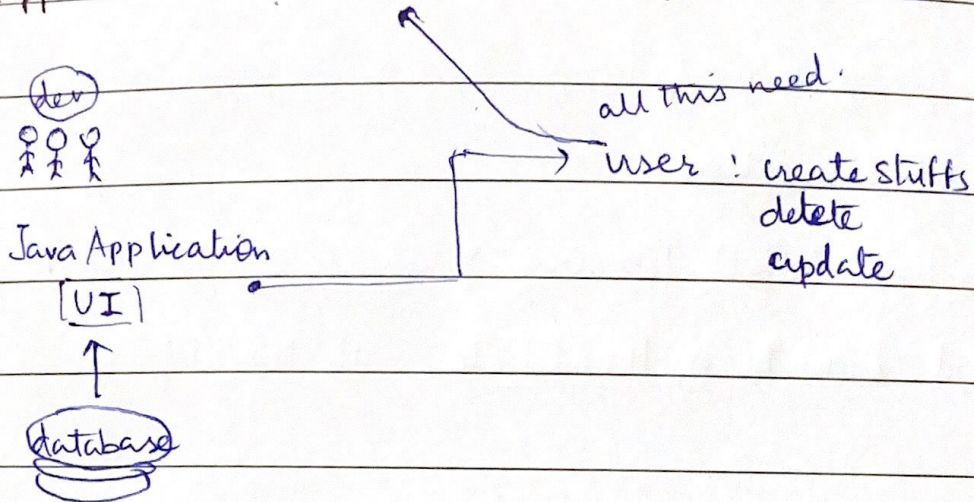
- locally (testing them) for development.

opt1 : Each developer install mysql DB locally.

Adv- You can't mess up others data test.

Disadv - manually set up the test data.

opt2 : DB hosted remotely.

Adv - Start coding right away.

- get the data immideately.

disadv - can't play around without affecting data of others.

Ideal Solution: to have both.

How our application talks to our database?

∴ In application code.

• Each programming lang. has a library /modules for DB connection.

• You have to tell library → which DB to talk to and how to authenticate with that DB.

Database endpoint /address ←

→ Credentials.
↑
Application can establish connection

• Shouldn't be hard coded

– define in 1 place as enviorment variables

– configure from outside

DEV   TEST   PROD

→ diff endpoints.

• define variable in code.

– Pass env variable on start up.

but not practical. /so → properties /config file

- Define the values in properties files.

   Ex:- NodeJS → config.json

• Databases in Production.

◉ Before app is deployed, DB are configured.

         Data → Important

  Replicate, Backups, performs under high load.

Roles! System Admin, DB engineer, Devops engineer .

                     ↓

  - How to Configure DB, set up, manage.

   - replicate, backup, restore DB,