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ASSIGNMENT - 02

Title: To demonstrate the use of PAAS tools

Aim: To demonstrate the use of Heroku PAAS tools

Objective:

- To study & implement use of different PAAS tools
- To implement & test programs on real cloud env

Theory:

Heroku is a container-based cloud Platform as a Service (PAAS). Developers use Heroku to deploy, manage and scale modern apps.
Heroku is fully managed, giving developers the freedom to focus on their core product without the distraction of maintaining servers, hardware, or ~~infrast~~ infrastructure.
Heroku provides services, tools, workflows, and pyglot support — all designed to enhance developer productivity.

It supports various languages such as NodeJS, Ruby, Python, Java, php, Golang, Scala, Clojure.

It has a CLI tool which makes interacting with its API very easy, and allows us to perform most tasks via a simple terminal command.

Each application runs in an isolated container, or "dyno", that can be scaled up to run on more powerful dyno, or multiple dyno.

It also offers useful add-ons for our applications like the ability to use Postgres, Redis or Apache Kafka in our applications

Steps to deploy app on Heroku:

- Login to heroku.com
- Create an app with "Create app" button & give it a name.
- Connect to your repository on Github. (Make sure your repository has the required "Procfile")
- Go to Deployment & click on "Manual Deploy"
- Your app is accessible at. https://app-name.herokuapp.com

Input : Input required by the app.

Output : Rendered pages as site.

Software : Editor / IDE : Jetbrains Pycharm
Language : Python (Flask)
Other : Heroku CLI

Conclusion :

Thus we have successfully completed & studied PaaS (Heroku) & implemented on real cloud environment.

Ex 6 :

1.] What are the different environments supported by your PaaS?

→ Heroku supports the following languages natively:

- Node.js
- Ruby
- Python
- Java
- PHP
- Golang
- Scala
- Closure

Other wanted enviroments can be add with the help of buildpacks.

2.] What are the features supported by your PaaS?

→
- Heroku Runtime - Smart containers, dynos.
- Heroku Postgres - Reliable & secure pgsql as a service.
- Heroku Redis - in-memory, key-value database as a service
- Scaling - Both vertically & horizontally
- Heroku DX (Development Experience) & OpEx (Operational Experience)
- Enterprise - Private spaces & more.

3.] Is your PaaS free or needs payment?

→ Heroku offers a free plan & a hobby dyno for free with 550 hours/month (1000 hrs/month after adding a payment method, still free).

This hobby dyno has basic specs, anything higher needs payment, which is calculated by the second.