

# App Feature: Deploying the app

**Relevel**  
by Unacademy



## Topics to covered:

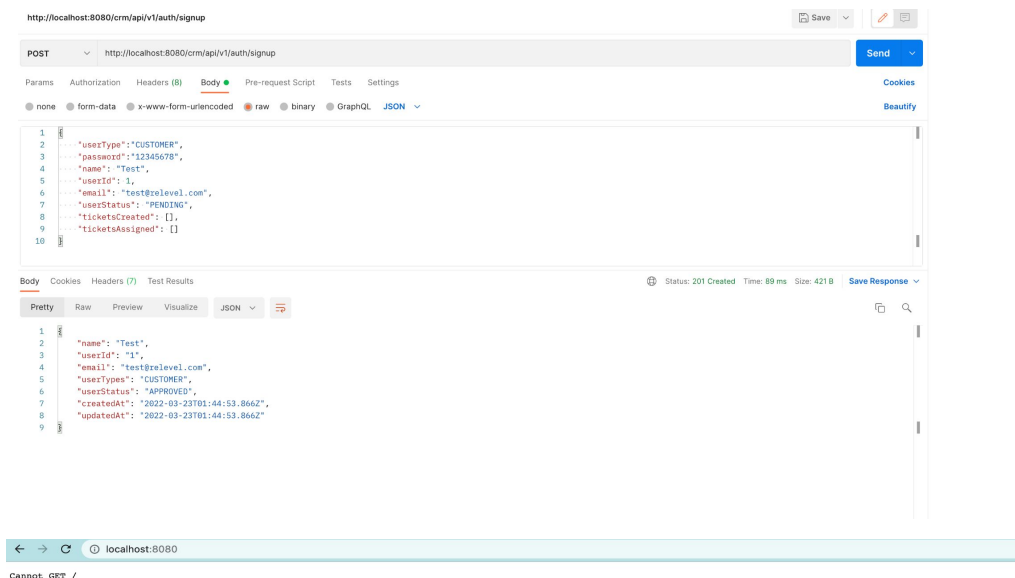
- What is hosting?
- Run a project locally : Backend App - <http://localhost:8080>
- Creating Repositories in Github
- Intro to Heroku
- Intro to Atlas

# What is hosting?

- Hosting means making our application available to the users via the internet.
- Many cloud service providers help us rent their server where our application code runs 24/7.
- These services are provided based on a free trial and price-based model for individuals and organizations. For example, Amazon AWS, Heroku, Microsoft Azure, Google Cloud, etc.

# Run a project locally : Backend App - <http://localhost:8080>

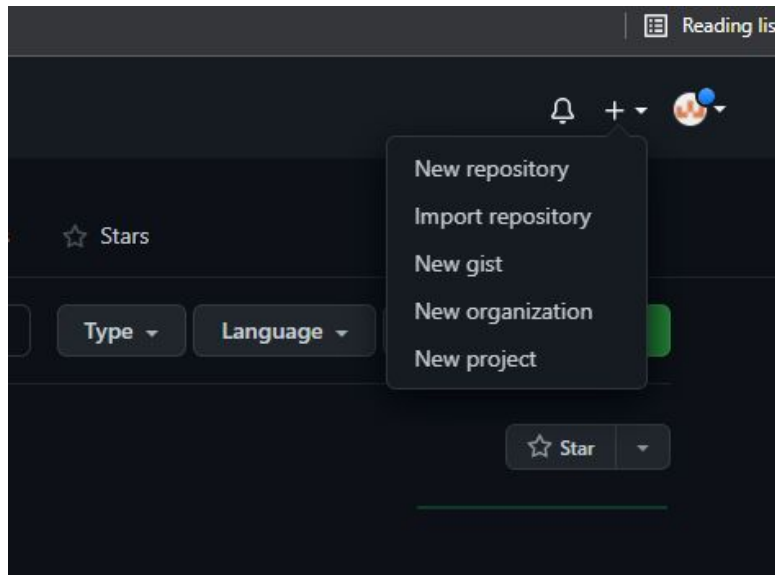
## npm start



# Creating Repositories

## Using Web Interface:

- Go to Repositories click on “New” or on the “+” icon in the top-right corner.
- Click on New repository



# Name the repo, create it.


## Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository](#).

---

Owner \*

Repository name \*


 Gtgstg

 / 


crm-backend ✓

Great repository name crm-backend is available. le. Need inspiration? How about [bookish-couscous?](#)

Description (optional)

☒  **Public**

Anyone on the internet can see this repository. You choose who can commit.

☐  **Private**

You choose who can see and commit to this repository.

**Initialize this repository with:**  
Skip this step if you're importing an existing repository.

☐ **Add a README file**

This is where you can write a long description for your project. [Learn more](#).

☐ **Add .gitignore**

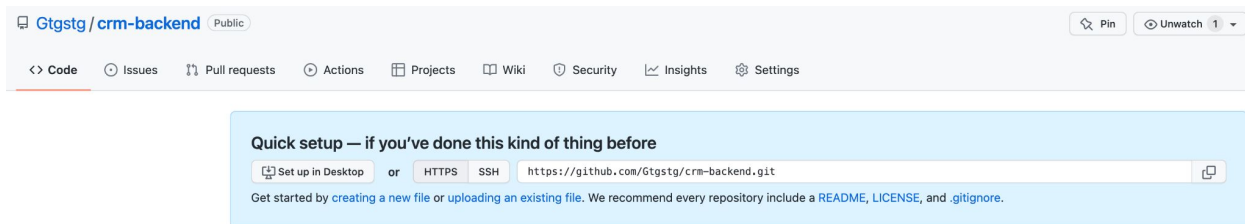
Choose which files not to track from a list of templates. [Learn more](#).

☐ **Choose a license**

A license tells others what they can and can't do with your code. [Learn more](#).

Create repository

Clone it to local, open cmd in the desired directory and write command  
**git clone <urlname>**



If you have existing code in the local machine that you want to push to Github it can be done by pasting the folders/files in this cloned directory and we can commit and push the files to the remote repo, using command line.

## Using the Command line:

- Create a directory in local or open cmd for the root directory of an existing project .
- Type `git init` this will make our current directory as a local git repository.
- We can add and commit the existing project files to the remote repository.
- Type **git add .** (to add all the files) or just **git add <file\_name>** you want to push.

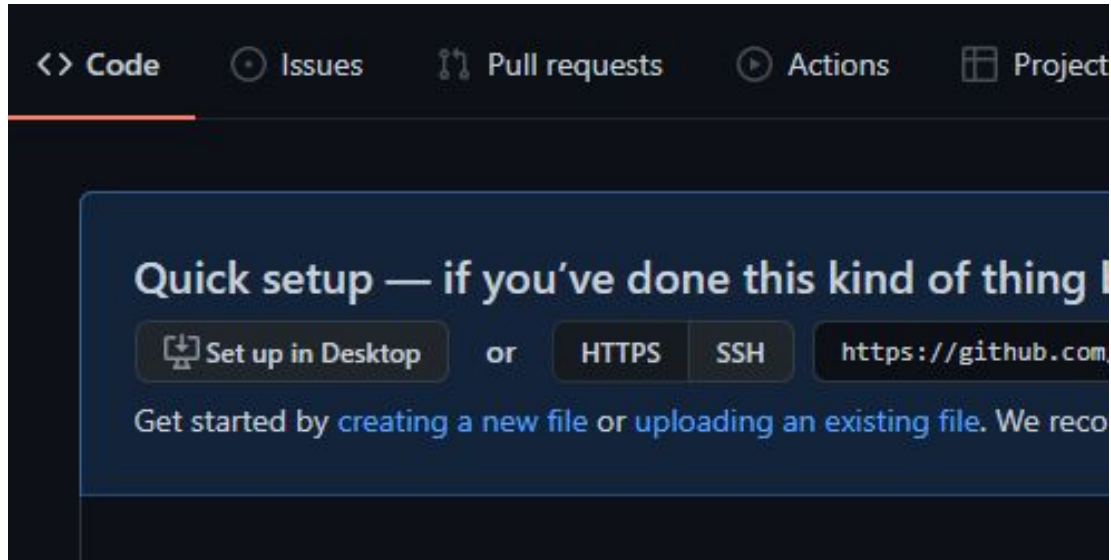


## Using the Command line:

- Type **git commit -m <commit message>** where commit message is a string that informs why this commit happens and its purpose.
- Now we have to connect it to GitHub:  
**git remote add origin**  
**git@github.com:username/<repo\_name>**
- Finally, push using: **git push origin master**.

## Using the Github desktop:

- To create a new repo Click on Set up in Desktop.



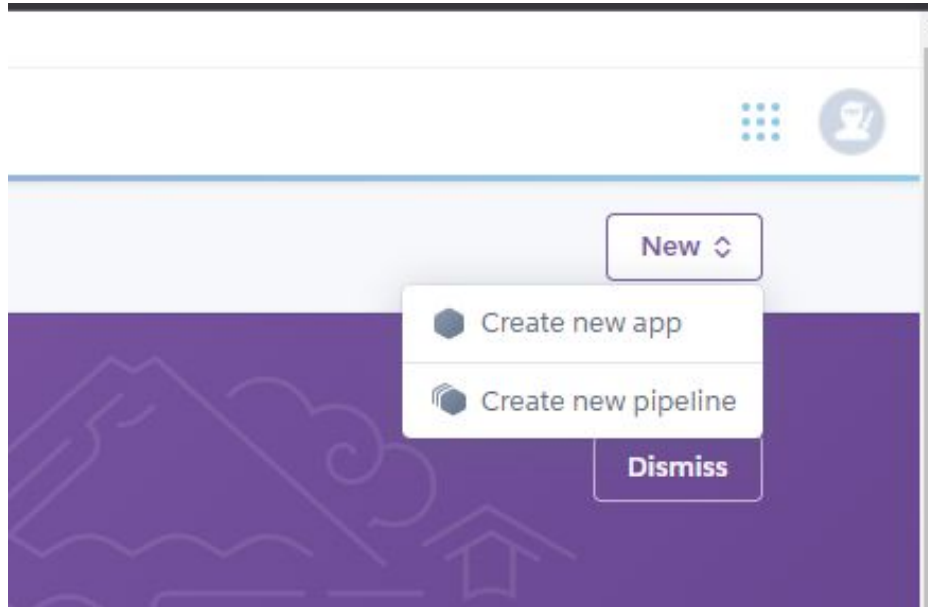
# Intro to Heroku

Heroku is a cloud platform that helps developers maintain, build, deliver, and scale apps.

## Deploy Backend App:

- Create an account on Heroku, (nothing much here just fill the prompted details and verify account for specified email id).
- Download Heroku CLI: <https://devcenter.heroku.com/articles/heroku-cli#download-and-install>

- Go to the Heroku website <https://dashboard.heroku.com/apps> and log in. After login, click on “New.” and click “Create new app”.



- We will be deploying our backend first.
- The name must be unique, and click on Create app.


Create New App

App name

relevel-crm-backend

relevel-crm-backend is available

Choose a region

 United States

Add to pipeline...

Create app

- Connect to GitHub now, it will prompt for authorization if Github is not already connected to Heroku

Overview Resources **Deploy** Metrics Activity Access Settings

**Add this app to a pipeline**  
Create a new pipeline or choose an existing one and add this app to a stage in it.

**Add this app to a stage in a pipeline to enable additional features**

Pipelines let you connect multiple apps together and **promote code** between them. [Learn more.](#)

Pipelines connected to GitHub can enable **review apps**, and create apps for new pull requests. [Learn more.](#)

Choose a pipeline

**Deployment method**

Heroku Git  
Use Heroku CLI

GitHub  
Connect to GitHub

Container Registry  
Use Heroku CLI

**Connect to GitHub**  
Connect this app to GitHub to enable code diffs and deploys.

**View your code diffs on GitHub**  
Connect your app to a GitHub repository to see commit diffs in the activity log.

**Deploy changes with GitHub**  
Connecting to a repository will allow you to deploy a branch to your app.

**Automatic deploys from GitHub**  
Select a branch to deploy automatically whenever it is pushed to.

**Create review apps in pipelines**  
Pipelines connected to GitHub can enable **review apps**, and create apps for new pull requests. [Learn more.](#)

**Connect to GitHub**

- Do manual deployment, then.

App connected to GitHub


Code diffs, manual and auto deploys are available for this app.

Disconnect...

Releases in the [activity feed](#) link to GitHub to view commit diffs

Automatic deploys

Enables a chosen branch to be automatically deployed to this app.

 You can now change your main deploy branch from "master" to "main" for both manual and automatic deploys, please follow the instructions [here](#).

Enable automatic deploys from GitHub

Every push to the branch you specify here will deploy a new version of this app. **Deploys happen automatically:** be sure that this branch is always in a deployable state and any tests have passed before you push. [Learn more](#).

Choose a branch to deploy

main

☐ Wait for CI to pass before deploy

Only enable this option if you have a Continuous Integration service configured on your repo.

Enable Automatic Deploys

Manual deploy

Deploy the current state of a branch to this app.

Deploy a GitHub branch

This will deploy the current state of the branch you specify below. [Learn more](#).

Choose a branch to deploy

main

Deploy Branch

photofunny

- It will start the deployment process. Once done click on view:

Your app was successfully deployed.





- This is our backend page, notice that our page has a domain name now.



Cannot GET /

# Intro to MongoDB Atlas

MongoDB Atlas is a multi-cloud database service by the same people that build MongoDB. Atlas simplifies deploying and managing your databases while offering the versatility you need to build resilient and performant global applications on the cloud providers of your choice.

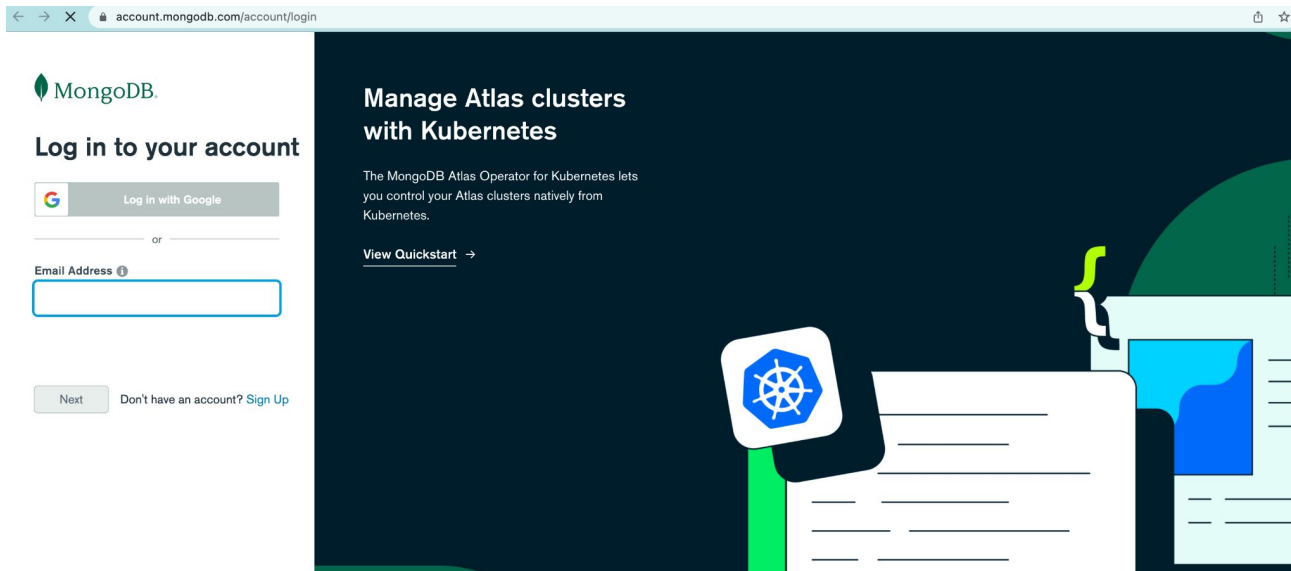
## Why do we need this?

So, Now our app is deployed but it will not work. As there is no database there to support our app on heroku. Also, heroku have add-ons that provides mongoDB but it is not free now.


So, we are using MongoDB Atlas because we can get free storage which will be useful to run our application.

# Changes to make mongoDb work

First login with <https://account.mongodb.com/account/login>



- Choose free plan

  
MONGODB ATLAS

## Deploy a cloud database

Experience the best of MongoDB on AWS, Azure, and Google Cloud. Choose a deployment option to get started.

PREVIEW

### Serverless

For serverless applications that aren't critical with variable traffic. Minimal configuration required.

- ☐ Pay only for the operations you run
- ☐ Resources scale seamlessly to meet your workload
- ☐ Always-on security and backups

Create

Starting at  
**\$0.30/1M reads**

[I'll do this later](#)

ADVANCED

### Dedicated

For production applications with sophisticated workload requirements. Advanced configuration controls.

- ☐ Network isolation and fine-grained access controls
- ☐ On-demand performance advice
- ☐ Multi-region and multi-cloud options available

Create

Starting at  
**\$0.08/hr\***  
\*estimated cost \$56.94/month

FREE

### Shared

For learning and exploring MongoDB in a cloud environment. Basic configuration options.

- ☐ No credit card required to start
- ☐ Explore with sample datasets
- ☐ Upgrade to dedicated clusters for full functionality

Create

Starting at  
**FREE**

[Advanced Configuration Options](#)

- Create a shared Cluster

### Create a Shared Cluster

Welcome to MongoDB Atlas! We've recommended some of our most popular options, but feel free to customize your cluster to your needs. For more information, check our [documentation](#).

PREVIEW Serverless

Dedicated

FREE Shared

For learning and exploring MongoDB in a sandbox environment. Basic configuration controls.  
No credit card required to start. Upgrade to dedicated clusters for full functionality.  
Explore with sample datasets. Limit of one free cluster per project.

Cloud Provider & RegionAWS, Mumbai (ap-south-1) ^

Cluster TierM0 Sandbox (Shared RAM, 512 MB Storage)  
Encrypted ^

Additional SettingsMongoDB 5.0, No Backup ^

Cluster Name

crm-db v

One time only: once your cluster is created, you won't be able to change its name.

crm-db

Cluster names can only contain ASCII letters, numbers, and hyphens.

FREE

Free forever! Your M0 cluster is ideal for experimenting in a limited sandbox. You can upgrade to a production cluster anytime.

Back

Create Cluster

- Create user

Edit User: crm-admin@admin

Update a database user to grant an application or user, access to databases and collections in your clusters in this Atlas project. Granular access control can be configured with default privileges or custom roles. You can grant access to an Atlas project or organization using the corresponding [Access Manager](#)

#### Authentication Method

Password

Certificate

AWS IAM  
(MongoDB 4.4 and up)

MongoDB uses [SCRAM](#) as its default authentication method.

#### Password Authentication

crm-admin

Edit Password

#### Database User Privileges

Configure role based access control by assigning database users a mix of one built-in role, multiple custom roles, and multiple specific privileges. A user will gain access to all actions within the roles assigned to them, not just the actions those roles share in common. **You must choose at least one role or privilege.** [Learn more about roles.](#)

##### Built-in Role

Select one [built-in role](#) for this user.

1 SELECTED

Atlas admin

##### Custom Roles

Select your [pre-defined custom role\(s\)](#). Create a custom role in the [Custom Roles](#) tab.

##### Specific Privileges

Select multiple privileges and what database and collection they are associated with. Leaving collection blank will grant this role for all collections in the database.

#### Restrict Access to Specific Clusters/Data Lakes

Enable to specify the resources this user can access. By default, all resources in this project are accessible.

OFF

- Make a User and set IP to access from anywhere.

The screenshot shows the 'Add IP Whitelist Entry' dialog box in the MongoDB Atlas interface. The background shows the 'Network Access' section with 'IP Whitelist' selected. The dialog box has a title bar with a close button. Inside, it explains that Atlas only allows client connections from the project's whitelist and provides a link to 'Learn more'. There are two tabs: 'ADD CURRENT IP ADDRESS' and 'ALLOW ACCESS FROM ANYWHERE', with the latter being selected. Below the tabs, there is a 'Whitelist Entry' field containing '0.0.0.0/0' and a 'Comment' field with the placeholder text 'Optional comment describing this entry'. At the bottom, there is a toggle switch for 'This entry is temporary and will be deleted in' followed by a dropdown menu set to '6 hours'. Finally, there are 'Cancel' and 'Confirm' buttons.

Access Manager Support Billing

Atlas Realm

MONGODB > ATLAS-HEROKU-DEMO

## Network Access

IP Whitelist Peering

### Add IP Whitelist Entry

Atlas only allows client connections to a cluster from entries in the project's whitelist. Each entry should either be a single IP address or a CIDR-notated range of addresses. [Learn more.](#)

ADD CURRENT IP ADDRESS ALLOW ACCESS FROM ANYWHERE

Whitelist Entry: 0.0.0.0/0

Comment: Optional comment describing this entry

☐ This entry is temporary and will be deleted in 6 hours

Cancel Confirm

Whitelist an IP address

Configure which IP addresses can access your cluster.

- Heroku add MongoDB configs

#### Config Vars

Config vars change the way your app behaves. In addition to creating your own, some add-ons come with their own.

#### Config Vars

[Hide Config Vars](#)

There are no config vars for this app yet

[Learn about config vars](#) in the Dev Center.

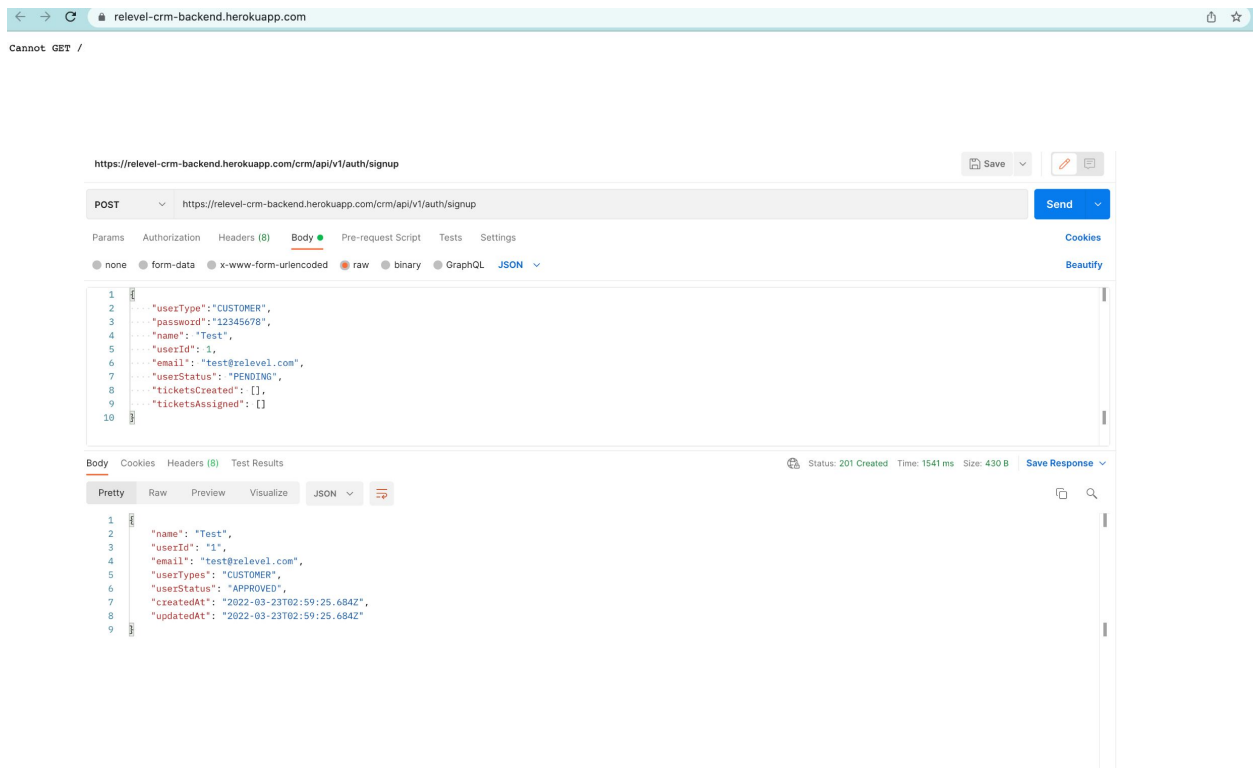
[Add](#)



- Changes for DB in code.

```
module.exports = {  
  ...  
  DB_NAME: "crm_db",  
  DB_URL: process.env.MONGODB_URI || "mongodb://localhost/crm_db"  
}
```

- Check for working code



# MCQs

1. What IP do we have used to access from everywhere?
  - a. 127.0.0.1
  - b. 0.0.0.0/0
  - c. relevel-crm-backend
  - d. None of the above
2. What access permission we have required for MongoDB?
  - a. Read and write to any database.
  - b. Only read permission.
  - c. Atlas admin
  - d. None of the above.
3. Where to add configs in Heroku?
  - a. Deploy -> configs
  - b. Deploy -> Config Vars
  - c. Setting -> configs
  - d. Setting -> Config Vars

4. Can Heroku addons also be used to connect with databases?

- a. No.
- b. Yes

5. Which branch is used for deployment from GitHub to Heroku?

- a. master
- b. We can choose.
- c. origin
- d. None of the above.

5. Which branch is used for deployment from GitHub to Heroku?

- a. master
- b. We can choose.
- c. origin
- d. None of the above.

## Practice/HW

- Create a new user database user with only read access.
- Try to add an API that will show a welcome message on /GET and deploy it.

**Thank you**