sudoThis assumes that you have a github, aws and circleci account.

Ssh into your instance

1. Navigate to github and open a new repo name it whatever you want
2. Open the folder of your application, open gitbash and navigate to the folder.
3. Run “mkdir .circleci” to make a folder for CircleCI
4. Run “touch .circleci/config.yml” to make a configuration YAML file which will hold instructions for CI
5. Add the code below to this file

Text

Description automatically generated

1. In your terminal run “git init”
2. “git add .”
3. “git commit -m ‘initial commit’”
4. “git remote add origin {your repo address}”
5. “git branch -M main”
6. “git push -u origin main”
7. This will then automatically appear as a project on your circleci dashboard
8. Click “set up project” and choose the option that uses the config.yml file from your repo
9. This should build your project without any issues
10. Update your .yml file on line 28 to include continuous testing

* Run:

name: test-run

command: npm run test

1. In the terminal run “npm run test” if this works, add, commit and push your work.
2. Now, navigate to your aws instance and click on security rules, add 2 new ports with the values Custom TCP, Port 3000, and custom ::/0 & 0.0.0.0/0 respectively
3. Ssh into your instance and run the command “sudo apt install nodejs npm”
4. The run “sudo npm install -g pm2”
5. “git clone {your repo}”
6. “sudo npm install”
7. “pm2 start app.js” or “pm2 start ./bin/www -name example\_app -env=production”
8. Navigate to your ip address and see the project live.
9. Now to configure circleci – navigate to your project and click on project settings, on the left click on the ~Environment Variables button.
10. Navigate to aws and open the main menu in the top right and click “security credentials” and select “Access Keys” click “create new access key” and download this file and keep it safe, (mine is in the same folder as my .pem file), this will generate an access key id and an access key.
11. Add the following variables

* EC2\_USERNAME = ubuntu
* EC2\_PUBLIC\_DNS = {your public dns goes here}
* AWS\_ACCESS\_KEY\_ID = {the id value from step 25 above}
* AWS\_SECRET\_ACCESS\_KEY = {the key value from step 25 above}

1. Now navigate to the menu on the left and click “SSH keys” and the “Add ssh key” button

* Input your public ipv4 value into the hostname field
* And the entire contents of your .pem file as the private key

1. Update your config.yml file to include a job for deployment, lines 12-17 and line 45 where we ssh into our instance using our variables.

Text

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1. In the root directory create a file called “deploy.sh” and add the following code:

A screenshot of a computer

Description automatically generated with medium confidence

1. Add, commit and push your repo
2. Lets make a new branch s owe can update our code run “git branch add\_home\_link” & “git checkout add\_home\_link”
3. Navigate to the html page of your application and add the following on line 9:

“<a href=”/math/add”<Calculator</a>”

1. Run the commands, “git status”, “git add .”, “git commit -m ‘new branch’”, “git push origin add\_home\_link”
2. Navigate to your github repo and click “pull requests”, “new pull request”, specify that we want to merge add\_home\_link with our main branch and click “create pull request” on the next screen click “create pull request” \* “merge pull request”
3. Our site is now live with the latest code.
4. Navigate back to your main branch by running “git checkout main” and “git pull”