



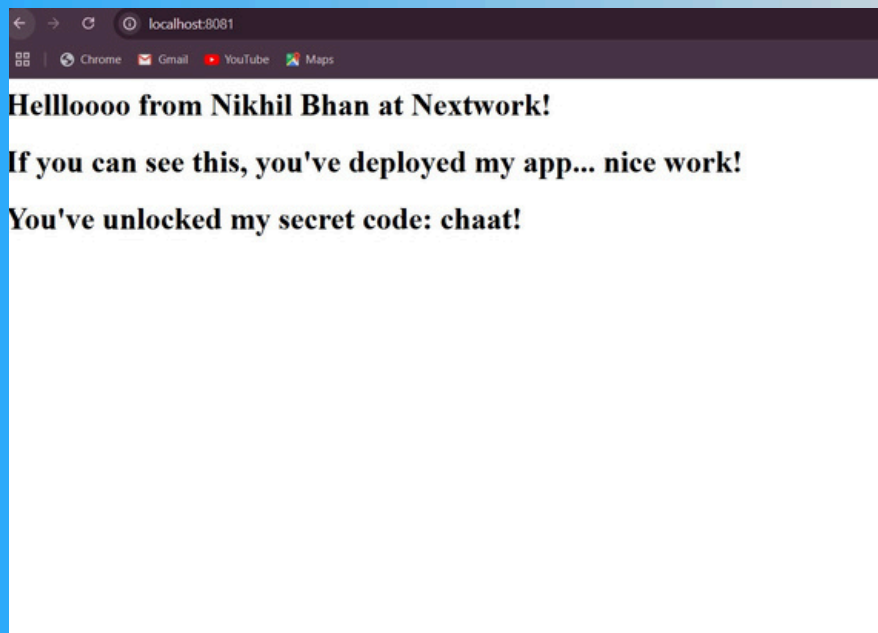
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Deploy an App Across Accounts



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Introducing Today's Project!

In this special multiplayer project, I am working with a buddy to build a Docker container image for a custom app. I'll store the image in Amazon ECR and then I'll share that container image with my project buddy.

What is Amazon ECR?

ECR stands for Elastic Container Registry. It's a fully managed container registry that makes it easy to store, manage, and deploy container images. I will store my image securely in Amazon ECR and share it with my project buddy.



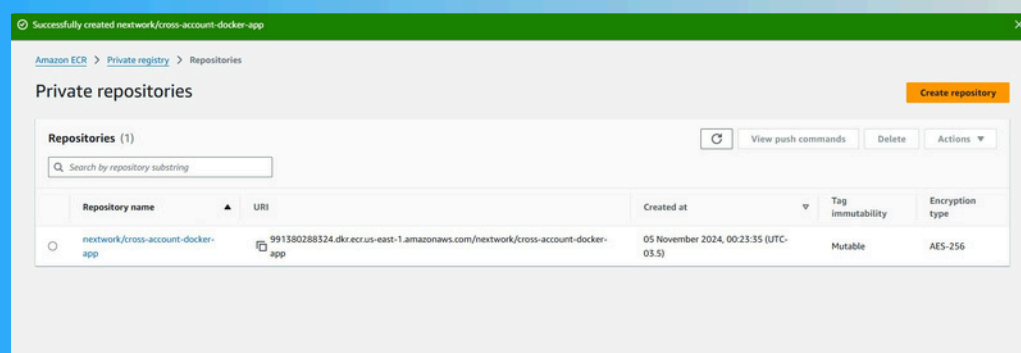
Creating a Docker Image

I set up a `dockerfile.txt` and an `index.html` file in the `DockerECR` folder on my desktop. I did this to set up a web page to view in my browser.

My Dockerfile tells Docker the instructions on how to create the container image.

I also set up an ECR repository

ECR stands for Elastic Container Registry. It is a fully managed container registry that makes it easy for us to store, manage, and deploy our container images.





Set Up AWS CLI Access

AWS CLI can let me run ECR commands

AWS CLI is a tool for managing AWS services from the terminal. The CLI asked for my credentials because it needs to know how to access AWS from the terminal and needs verification.

To enable CLI access, I set up a new IAM user with the permission policy AmazonEC2ContainerRegistryFullAccess. I also set up an access key for this user, which means I can login my terminal with my IAM user which has a different set of permissions.

To pass my credentials to the AWS CLI, I ran the command "AWS configure." I had to provide the access key ID, the secret key ID, and the default region name.

```
PS C:\Users\Kanika> aws configure --profile personal
AWS Access Key ID [None]: |
```



Pushing My Image to ECR

Push commands in Amazon ECR allow users to upload container images from their local system to an ECR repository using Docker.

There are three main push commands

To authenticate Docker with my ECR repo, I used the command "aws ecr get-login-password."

To push my container image, I ran the command docker push. Pushing means that the image will be uploaded to the repository that I created in AWS ECR.

When I built my image, I tagged it with the label "latest." This means that the image is the most recent version.



Resolving Permission Issues

When I tried pulling my project buddy's container image for the first time, I saw the error "pull access denied." This was because I did not have permission to access my project buddy's image in the repository.

To resolve the permission errors, my buddy and I modified the repository policy by adding each other's IAM ARN to the "Principal" in the policy JSON. This will allow them to view the repository image.

```
PS C:\Users\Kanika> docker pull 799990344483.dkr.ecr.ca-central-1.amazonaws.com/nextwork/cross-account-docker-app:latest
Error response from daemon: pull access denied for 799990344483.dkr.ecr.ca-central-1.amazonaws.com/nextwork/cross-account-docker-app, repository does not exist or may require 'docker login': denied: User: arn:aws:iam::358878421599:user/mkanika.90@gmail.com is not authorized to perform: ecr:BatchGetImage on resource: arn:aws:ecr:ca-central-1:799990344483:repository/nextwork/cross-account-docker-app because no resource-based policy allows the ecr:BatchGetImage action
PS C:\Users\Kanika>
```



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