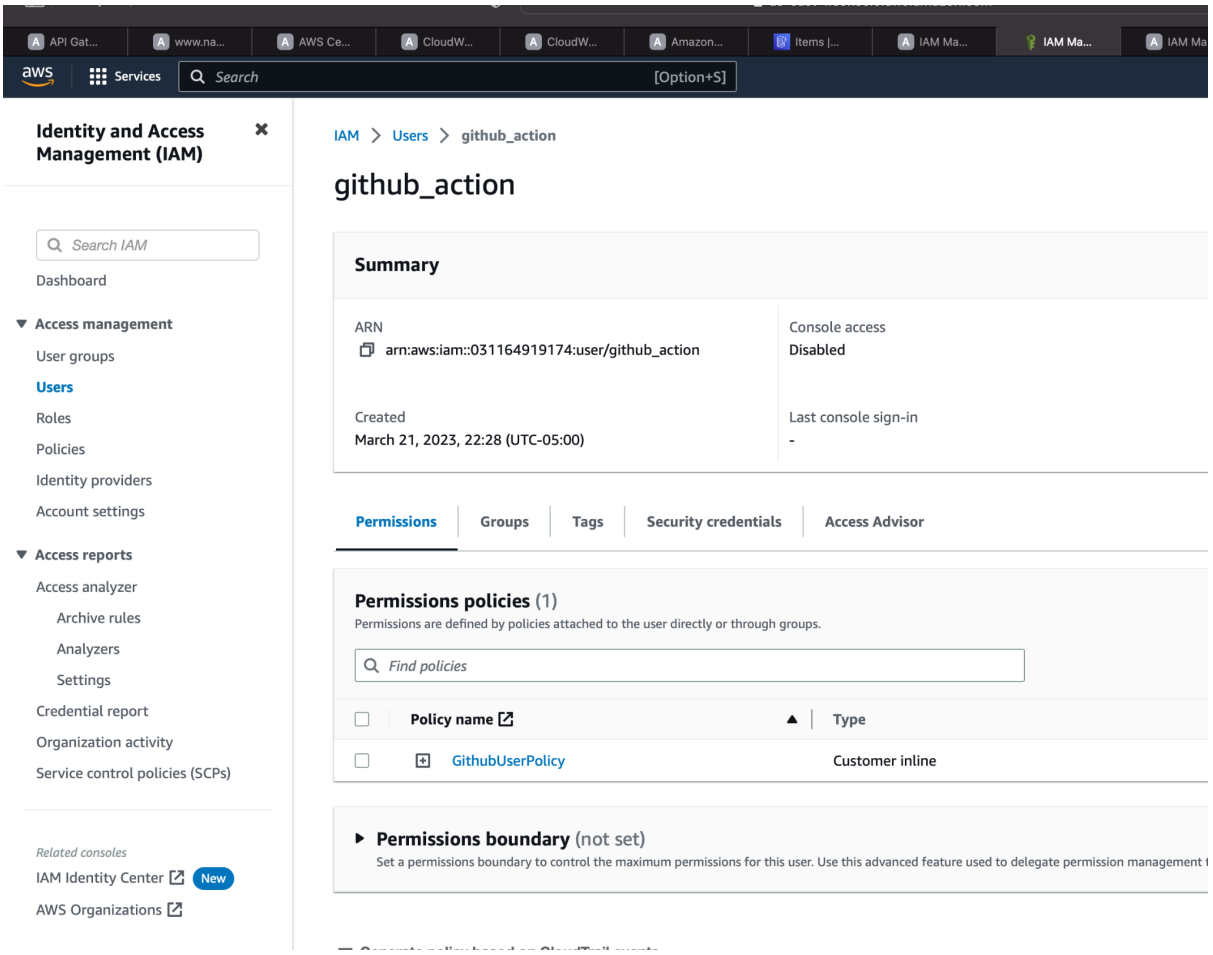
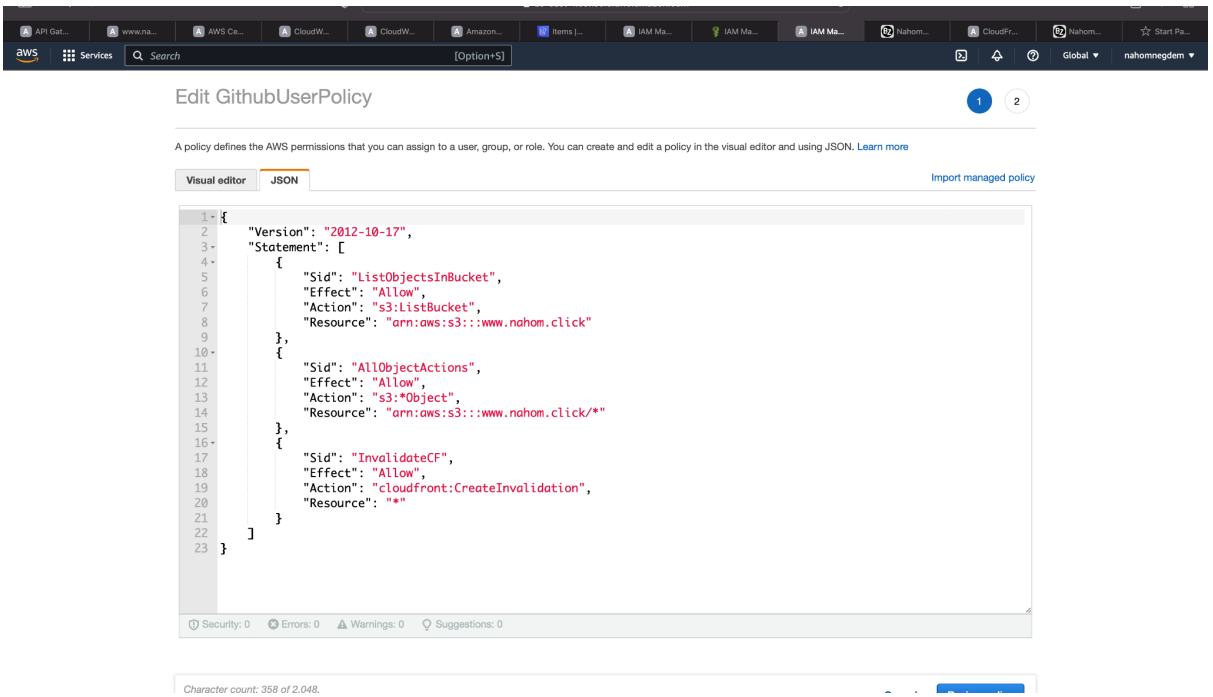
CI/CD S3 deployment with Github Actions

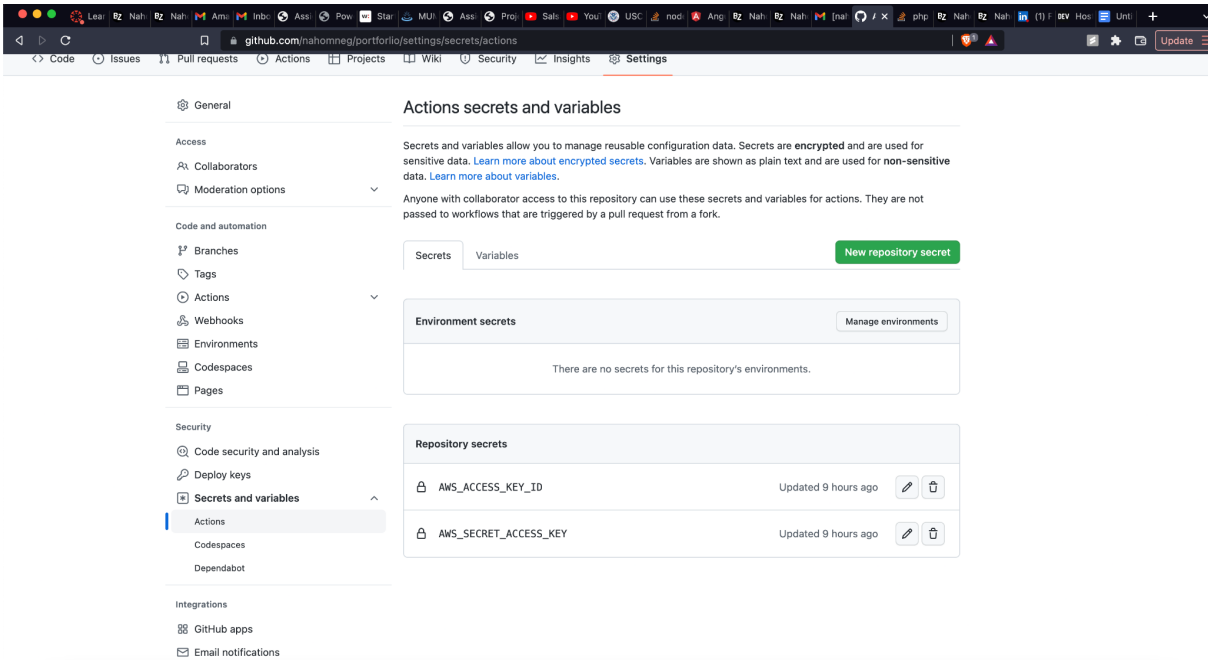
Step 1: Create an IAM user to be used by GitHub actions.



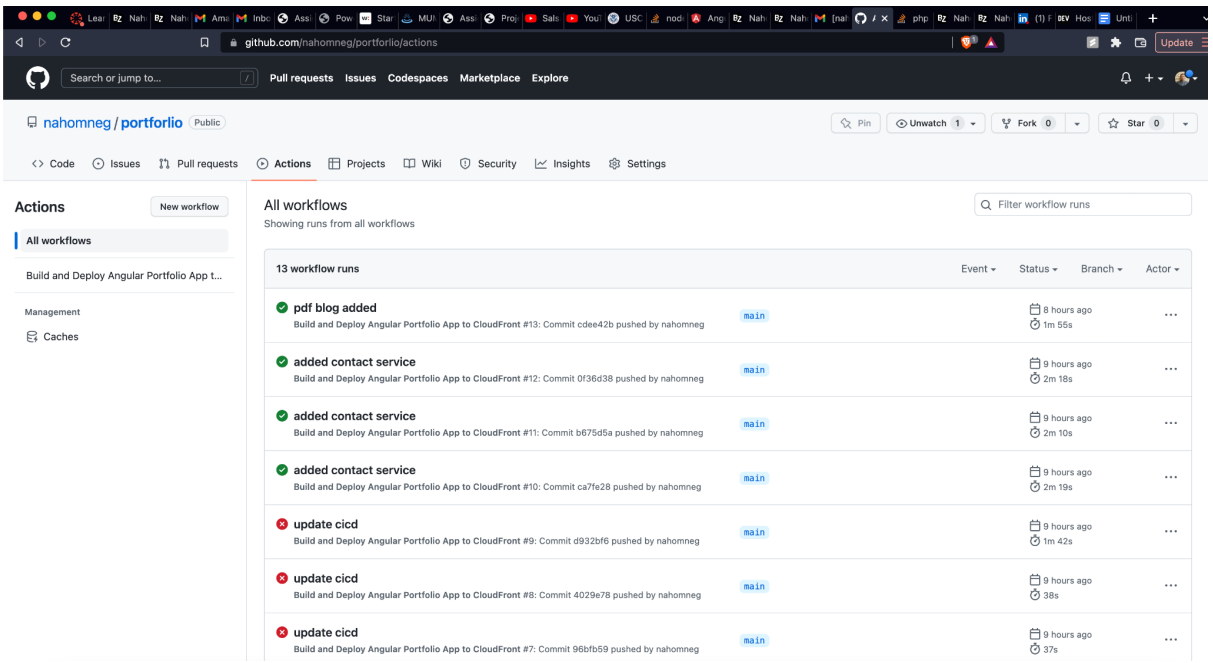
Step 2: Add the following permission by specifying the S3 bucket



Step 3: Set secret variables in Github.



Step 4: Create a workflow in github actions by clicking on new workflow button



Create a new workflow and type the following in the yaml file

```yaml
---
name: Build and Deploy Angular Portfolio App to CloudFront
on:
 push:
   branches: [ main ]
jobs:
 build-and-deploy:
   name: Build and Deploy
   runs-on: ubuntu-latest
   env:
     BUCKET: www.nahom.click
     DIST: dist/my-portfolio
     REGION: us-east-1
     DIST_ID: E3OQ3A6YJIAJAF

   steps:
   - name: Checkout code
     uses: actions/checkout@v2

   - name: Configure AWS Credentials
     uses: aws-actions/configure-aws-credentials@v1
     with:
       aws-access-key-id: ${{ secrets.AWS_ACCESS_KEY_ID }}
       aws-secret-access-key: ${{ secrets.AWS_SECRET_ACCESS_KEY }}
       aws-region: ${{ env.REGION }}

   - name: Set up Node.js environment
     uses: actions/setup-node@v2
     with:
       node-version: '14'
   - name: Install Dependencies
```

```
    run: |
      node --version
      npm ci --production

  - name: Build Static Website
    run: |
      npm link @angular/cli
      npm install @angular-devkit/build-angular --force
      npm run build

  - name: Copy files to the production website with the AWS CLI
    run: |
      aws s3 sync --delete ${{ env.DIST }} s3://${{ env.BUCKET }}

  - name: Copy files to the production website with the AWS CLI
    run: |
      aws cloudfront create-invalidation \
        --distribution-id ${{ env.DIST_ID }} \
        --paths "/*"
```

Step 5: pull the yaml file to your local file and now you can push new changes to github and a work flow to update the s3 and invalidate the previous caches in CloudFront will happen.