Documentation for Deploy Node js web app on AWS S3 via GitHub Actions (DHF-SaaS)

This YAML script automates the deployment of a React app to AWS S3 when changes are pushed to the `stage`, `dev`, or `main` branches in GitHub. It sets up Node.js, installs dependencies, builds the app, and uses AWS CLI to sync the `./dist` directory to `s3://docsforhealthweb`, ensuring old files are deleted.

1. Create AWS IAM User with S3 Full Access

1. **Sign into the AWS Management Console** and open the IAM console.
2. **Navigate to Users** > **Add user**.
3. **Enter user details**:
    - Username: your-username
    - Select **Programmatic access**.
4. **Permissions**:
    - Select **Attach existing policies directly**.
    - Search for **AmazonS3FullAccess** and check it.
5. **Review and create the user**. Note down the **Access key ID** and **Secret access key**.

2. Create an S3 Bucket and Give Public Access

1. **Open the Amazon S3 console**.
2. **Create bucket**: Enter a name and region.
3. **Uncheck** "Block all public access".
4. **Create the bucket**.

3. Edit Bucket Policy

1. **Go to the S3 console** and select your bucket.
2. **Permissions tab** > **Edit Bucket policy**.
3. **Paste the policy** (replace bucket_name):

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Sid": "AllowPublicReadAccess",
            "Effect": "Allow",
            "Principal": "*",
            "Action": "s3:GetObject",
            "Resource": "arn:aws:s3:::bucket_name/*"
        }
    ]
}
```

4. Add AWS Credentials to GitHub Secrets

1. **Go to GitHub repository** > **Settings** > **Secrets and variables** > **Actions**.
2. **Add secrets**:
    - AWS_ACCESS_KEY_ID: Your AWS Access key ID
    - AWS_SECRET_ACCESS_KEY: Your AWS Secret access key

5. Create a New Branch for Staging

1. **Go to your GitHub repository**.
2. **Create new branch**: Type stage and press Enter.

6. Set Up GitHub Actions Workflow

1. **Create folder**: .github/workflows in your repository.
2. **Create file**: main.yml in the workflows folder.

7. Add Deployment Workflow

```yaml
name: Deploy React App to AWS S3

on:
  push: # Trigger on push events
    branches: # Trigger on pushes to these branches
      - stage
      - dev
      - main

jobs:
  build_and_deploy:
    runs-on: ubuntu-latest

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

      - name: Set up Node.js
        uses: actions/setup-node@v2
        with:
          node-version: '21' # Specify the Node.js version to use

      - name: Install Dependencies
        run: npm install

      - name: Build
        run: |
          npm run build

      - name: Deploy # Step to deploy the project to AWS S3
        run: |
          aws configure set aws_access_key_id ${{ secrets.AWS_ACCESS_KEY_ID }}
          aws configure set aws_secret_access_key ${{ secrets.AWS_SECRET_ACCESS_KEY }}
          aws configure set region us-east-1
          aws s3 sync ./dist s3://docsforhealthweb -delete
          # Sync the built files to the S3 bucket and delete previous files
```