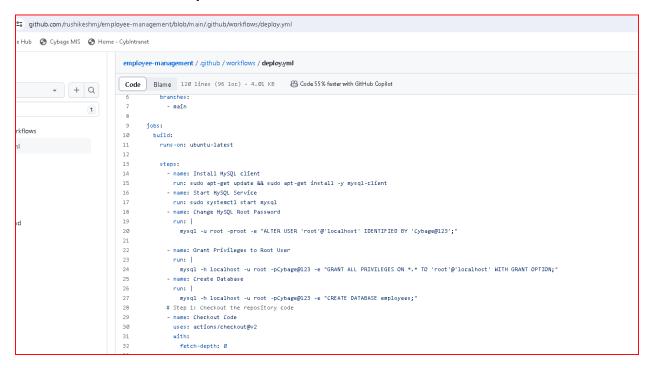
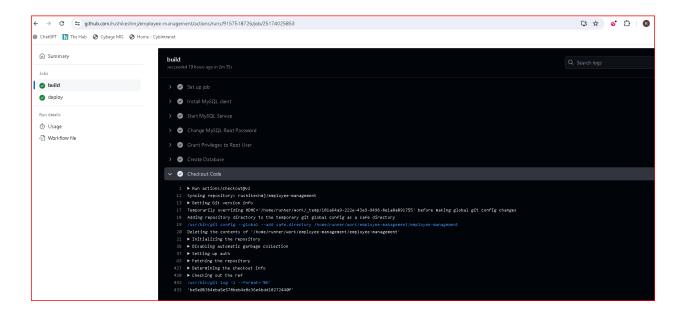
Github Actions

1. CI steps for GitHub Actions workflow which includes

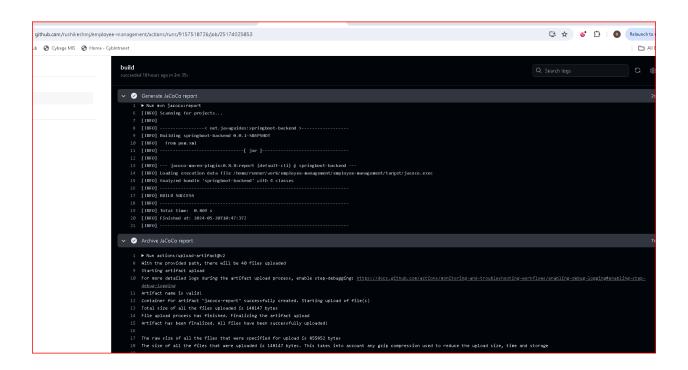
I. Checkout code to repo



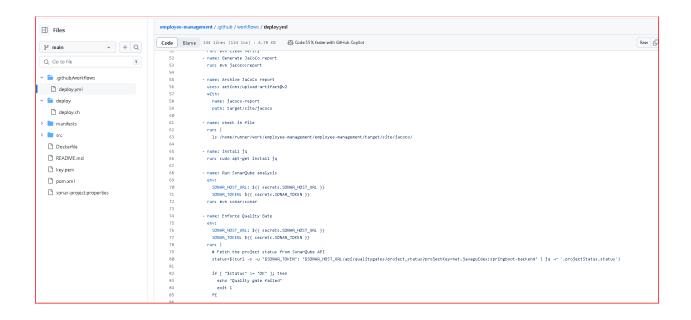


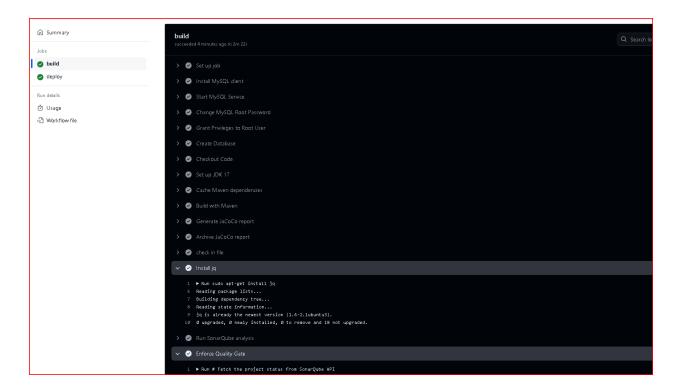
II. unit testing & code coverage using jacoco

```
employee-management / .github / workflows / deploy.yml
Code Blame 120 lines (96 loc) · 4.01 KB 🔐 Code 55% faster with GitHub Copilot
               uses: actions/setup-java@v2
                with:
   37
  38
                  distribution: 'adopt'
                java-version: '17'
  39
  40
             # Step 4: Cache Maven dependencies
  41
             - name: Cache Maven dependencies
  43
                uses: actions/cache@v3
  44
                with:
                path: ~/.m2
  45
  46
                  key: ${{ runner.os }}-maven-${{ hashFiles('**/pom.xml') }}
                 restore-keys: ${{ runner.os }}-maven
  47
  48
             # Step 5: Build the project and run unit tests with JaCoCo for test coverage
             - name: Build with Maven
  50
  51
                run: mvn clean verify
              - name: Generate JaCoCo report
  53
                run: mvn jacoco:report
  54
  55
             - name: Archive JaCoCo report
              uses: actions/upload-artifact@v2
              with:
  57
  58
                  name: jacoco-report
                path: target/site/jacoco
  60
             - name: check in file
  61
              run:
   63
                  ls /home/runner/work/employee-management/employee-management/target/site/jacoco/
   64
```

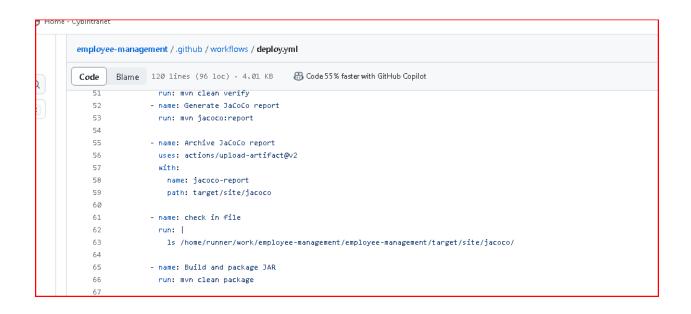


III. SCA using sonarqube along with quality gates



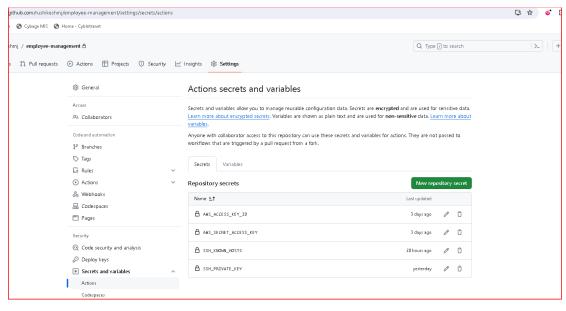


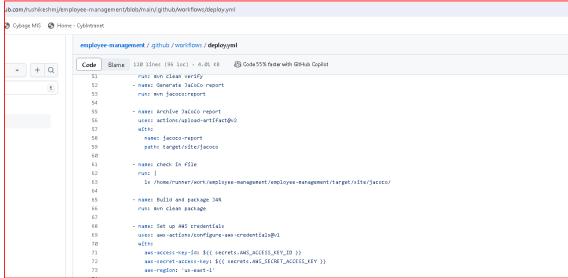
IV. Build and package JAR

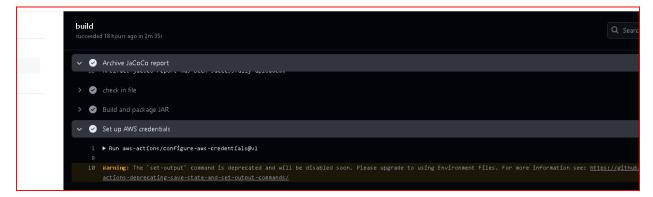




V. Configuration of AWS







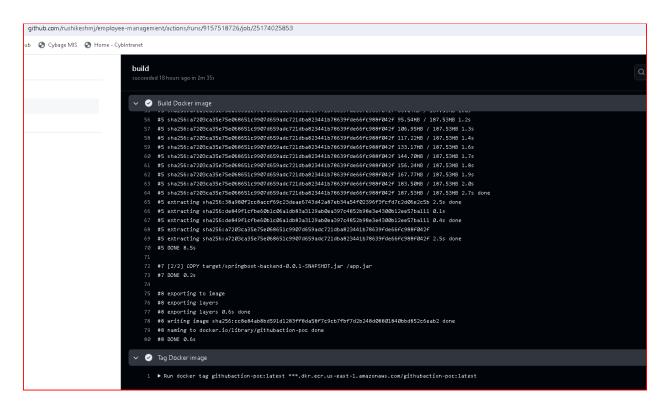
VI. login to ECR

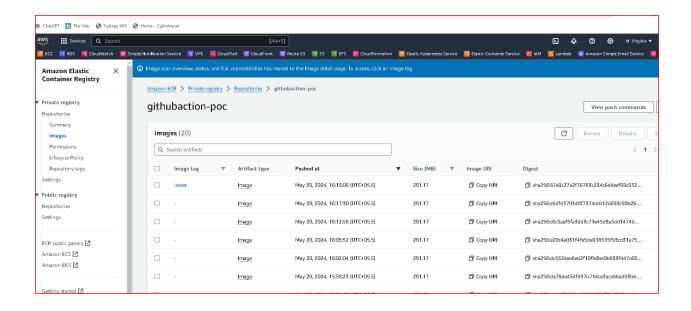
```
employee-management / .github / workflows / deploy.yml
Code Blame 120 lines (96 loc) · 4.01 KB 🔐 Code 55% faster with GitHub Copilot
   56
                 uses: actions/upload-artifact@v2
                with:
   57
                  name: jacoco-report
   59
                 path: target/site/jacoco
   60
   61
             - name: check in file
               run:
   62
   63
                 ls /home/runner/work/employee-management/employee-management/target/site/jacoco/
   64
            - name: Build and package JAR
   66
                run: mvn clean package
   67
   68
             - name: Set up AWS credentials
   69
                uses: aws-actions/configure-aws-credentials@v1
   70
                with:
   71
                  aws-access-key-id: ${{ secrets.AWS_ACCESS_KEY_ID }}
                 aws-secret-access-key: ${{ secrets.AWS_SECRET_ACCESS_KEY }}
   73
                  aws-region: 'us-east-1'
   75
             - name: Login to Amazon ECR
   76
               id: login-ecr
   77
               uses: aws-actions/amazon-ecr-login@v1
   78
               - name: Build Docker image
   79
                run: docker build -t githubaction-poc .
```



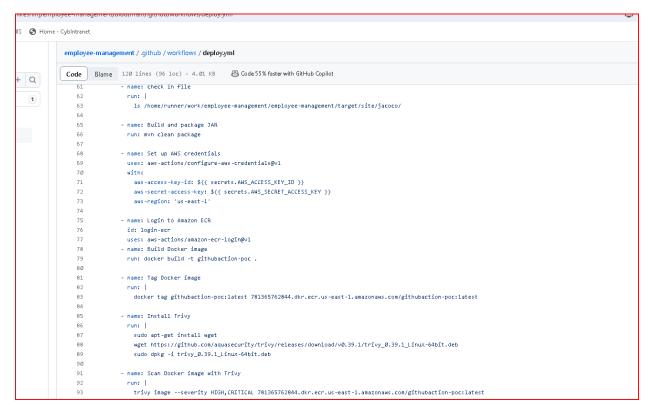
VII. Build & tag Docker image

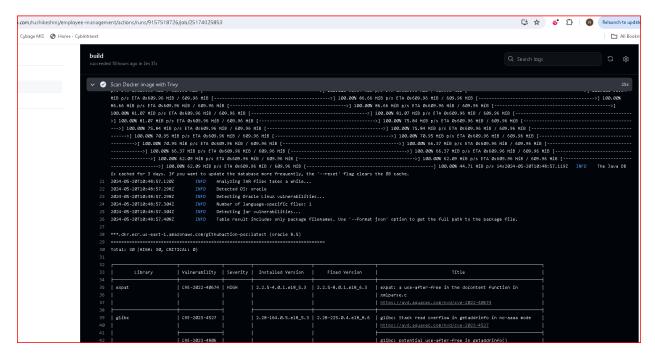




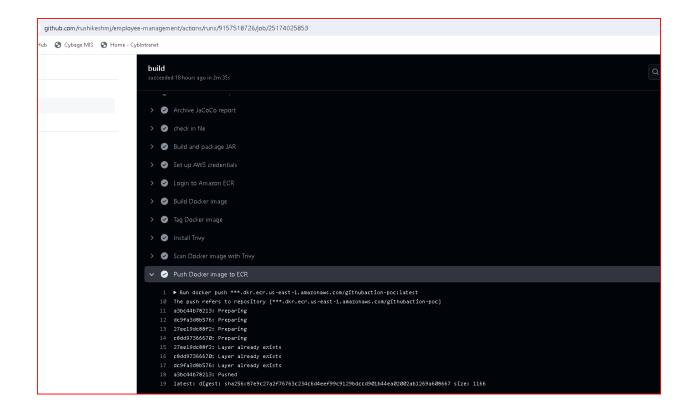


VIII. Scan the image using CI tool (Trivy)





IX. Push image to ECR



```
rushikeshmj/employee-management/blob/main/.github/workflows/deploy.yml
e MIS 🔞 Home - Cybintranet
                 employee-management / .github / workflows / deploy.yml
                Code Blame 120 lines (96 loc) · 4.01 KB 🖰 Code 55% faster with GitHub Copilot
 + Q
                                  run: mvn clean package
                    67
      t
                                - name: Set up AWS credentials
                    68
                                  uses: aws-actions/configure-aws-credentials@v1
                                    aws-access-key-id: ${{ secrets.AWS_ACCESS_KEY_ID }}
                                    aws-secret-access-key: ${{ secrets.AWS_SECRET_ACCESS_KEY }}
                    73
                                    aws-region: 'us-east-1'
                                - name: Login to Amazon ECR
                                  id: login-ecr
                    77
                                  uses: aws-actions/amazon-ecr-login@v1
                                 - name: Build Docker image
                    78
                    79
                                  run: docker build -t githubaction-poc .
                    81
                                 - name: Tag Docker image
                    82
                                    docker tag githubaction-poc:latest 781365762844.dkr.ecr.us-east-1.amazonaws.com/githubaction-poc:latest
                    83
                                 - name: Install Trivy
                    87
                                     sudo apt-get install wget
                    88
                                     wget https://github.com/aquasecurity/trivy/releases/download/v0.39.1/trivy_0.39.1_Linux-64bit.deb
                                    sudo dpkg -i trivy_0.39.1_Linux-64bit.deb
                    89
                                 - name: Scan Docker image with Trivy
                    92
                                    trivy image --severity HIGH,CRITICAL 781365762844.dkr.ecr.us-east-1.amazonaws.com/githubaction-poc:latest
                    93
                                 - name: Push Docker image to ECR
                    97
                                     docker push 781365762844.dkr.ecr.us-east-1.amazonaws.com/githubaction-poc:latest
```

2. CD step

I. Deploy application on EC2 using SSH with key-value

