

Documentation on security measures implemented

Specify SHA version instead of version number like v4, v5, ...

```
- uses: actions/checkout@ee0669bd1cc54295c223e0bb666b733df41de1c5
  # SECURITY ISSUE: Not pinning action version with SHA

- name: Set up Python
  uses: actions/setup-python@e9aba2c848f5ebd159c070c61ea2c4e2b122355e
  # SECURITY ISSUE: Not pinning action version with SHA
  with:
    python-version: '3.9'
```

Add security test (SAST) using Bandit and disable pytest because the application didn't contain any tests, if still run pytest the CI will exit and failed

```
- name: Install dependencies
  run: |
    python -m pip install --upgrade pip
    if [ -f app/requirements.txt ]; then pip install -r app/requirements.txt;
fi
    pip install pytest bandit

- name: Run tests
  run: |
    # SECURITY ISSUE: Not running security tests
    bandit -r ./app
    # pytest app/
```

Add scanning Docker image vulnerabilities by using Trivy after Docker build process

```
- name: Build Docker image
  run: |
    docker build -t user-management:${{ github.sha }} app/
    # SECURITY ISSUE: Not scanning the Docker image for vulnerabilities
    docker run --rm -v /var/run/docker.sock:/var/run/docker.sock -v
$HOME/Library/Caches:/root/.cache/ aquasec/trivy:latest image user-
management:${{ github.sha }}
```

Scan all the application dependencies using Safety

```
# SECURITY ISSUE: No dependency scanning
- name: Dependency scanning
  run: |
    pip install safety
    safety check -r requirements.txt
```

Add code secret scanning using detect-secrets from Python

```
# SECURITY ISSUE: No secrets scanning
- name: Secrets scanning
  run: |
    pip install detect-secrets
    detect-secrets scan .
```

Use AWS IAM to get Github credentials instead of hardcoded

```
- name: Configure AWS credentials
  uses: aws-actions/configure-aws-credentials@v1
  with:
    # SECURITY ISSUE: Hardcoded credentials
    role-to-assume: arn:aws:iam::003028641075:role/github-actions-build
    aws-region: us-east-1
```