# I. PMD:

On your kali Linux terminal, run the commands highlighted in yellow below:

## First lets clone a java based project, Apache Synapse:

```
mkdir ~/CYBR515
```

```
svn checkout http://svn.apache.org/repos/asf/synapse/trunk/java
```

## A. Download and Extract PMD

```
mkdir ~/pmd
```

```
wget https://github.com/pmd/pmd/releases/download/pmd_releases%2F6.42.0/pmd-bin-6.42.0.zip -P ~/pmd
```

```
unzip ~/pmd/pmd-bin-6.42.0.zip -d ~/pmd
```

## B. Run PMD on Your Java Project

### Navigate to your SVN repository directory and run PMD:

### # Navigate to your Java project directory

```
cd ~/CYBR515/java
```

### # Run PMD

```
~/pmd/pmd-bin-6.42.0/bin/run.sh pmd -d . -R category/java/bestpractices.xml,category/java/security.xml -f html -r ~/CYBR515/pmd-report.html
```

### View “pmd-report.html” report under the CYBR515 folder

Once the scan is complete, open the generated HTML report (`pmd-report.html`) in a web browser to review the detected vulnerabilities and issues in your Java code. By following these steps, you should be able to successfully run PMD on your Java project and generate a comprehensive report. This will help you identify and address any code quality and security issues.

## II. OWASP dependency-check

### A. Install OWASP Dependency-Check

# Download and extract Dependency-Check

```
mkdir ~/dependency-check

cd ~/dependency-check

wget https://github.com/jeremylong/DependencyCheck/releases/download/v8.0.1/dependency-check-8.0.1-release.zip

unzip dependency-check-8.0.1-release.zip
```

### B. Run OWASP Dependency-Check

```
# Navigate to your Java project directory

cd ~/CYBR515/java


# Run Dependency-Check

~/dependency-check/bin/dependency-check.sh --project "My Java Project" --scan . --format HTML --out ~/CYBR515/dependency-check-report.html
```

### C. View report:

Open the generated HTML report (dependency-check-report.html) in a web browser to review the detected vulnerabilities and issues in your Java code.

## III. Bandit:

Bandit works with python only. Lets clone a python based source code repo:

```
git clone https://github.com/king04aman/All-In-One-Python-Projects
```

A. **Install Bandit**: pip install bandit

```
# Using a wildcard

bandit -r ~/CYBR515/ All-In-One-Python-Projects*
```

```
# Using find command (more reliable)
find /path/to/project/ -type d -exec bandit -r {} +
```

# IV. Snyk:

## A. Sign Up and Set Up Snyk:

- Visit Snyk and sign up for a free account.

## B. Installing Snyk CLI

```
npm install -g snyk
```

## C. Authenticate with Snyk :

```
snyk auth
```

## D. Scan Your Java Project

```
cd ~/CYBR515/java
```

```
snyk test
```