Jesse Arstein

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HW 4

Question 1:

a)

1. We downloaded the Zerocode system.
2. Zerocode is a framework that makes it easier to write automated tests against API interfaces. It basically makes API calls into easy to call JSON files and makes it easy to do security, stress and load testing.
3. There is 34296 lines of code in the GitHub repository. We calculated this by using a chrome extension that counts the lines of code within a GitHub repository.

b)

1. Found 22 files that possibly contain design patterns.

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\main\java\org\jsmart\zerocode\core\domain\builders\ExtentReportsFactory.java
Possible patterns: Factory

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\main\java\org\jsmart\zerocode\core\domain\builders\HighChartColumnHtmlBuilder.java
Possible patterns: Builder

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\main\java\org\jsmart\zerocode\core\domain\builders\ZeroCodeChartKeyValueArrayBuilder.java
Possible patterns: Builder

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\main\java\org\jsmart\zerocode\core\domain\builders\ZeroCodeChartKeyValueBuilder.java
Possible patterns: Builder

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\main\java\org\jsmart\zerocode\core\domain\builders\ZeroCodeCsvReportBuilder.java
Possible patterns: Builder

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\main\java\org\jsmart\zerocode\core\domain\builders\ZeroCodeExecReportBuilder.java
Possible patterns: Builder

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\main\java\org\jsmart\zerocode\core\domain\builders\ZeroCodeIoWriteBuilder.java
Possible patterns: Builder

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\main\java\org\jsmart\zerocode\core\domain\builders\ZeroCodeReportStepBuilder.java
Possible patterns: Builder

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\main\java\org\jsmart\zerocode\core\engine\preprocessor\ScenarioExecutionState.java
Possible patterns: State

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\main\java\org\jsmart\zerocode\core\engine\preprocessor\StepExecutionState.java

Possible patterns: State

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\main\java\org\jsmart\zerocode\core\httpclient\ssl\CorporateProxyNoSslContextHttpClient.java
Possible patterns: Proxy

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\main\java\org\jsmart\zerocode\core\httpclient\ssl\SslTrustCorporateProxyHttpClient.java
Possible patterns: Proxy

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\main\java\org\jsmart\zerocode\core\logbuilder\RequestLogBuilder.java
Possible patterns: Builder

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\main\java\org\jsmart\zerocode\core\logbuilder\ResponseLogBuilder.java
Possible patterns: Builder

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\main\java\org\jsmart\zerocode\core\logbuilder\ScenarioLogBuilder.java
Possible patterns: Builder

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\test\java\org\jsmart\zerocode\core\domain\builders\ZeroCodeIoWriteBuilderTest.java
Possible patterns: Builder

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\test\java\org\jsmart\zerocode\core\engine\preprocessor\ScenarioExecutionStateTest.java
Possible patterns: State

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\test\java\org\jsmart\zerocode\core\engine\preprocessor\StepExecutionStateTest.java
Possible patterns: State

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\test\java\org\jsmart\zerocode\core\httpclient\ssl\SslTrustCorporateProxyHttpClientTest.java
Possible patterns: Proxy

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\test\java\org\jsmart\zerocode\core\runner\retry\RetryWithStateTest.java
Possible patterns: State

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\test\java\org\jsmart\zerocode\core\soap\SoapCorpProxySslHttpClientTest.java
Possible patterns: Proxy

D:\College Files\Fall 2019\Software Engineering\HW4\zerocode-master\core\src\test\java\org\jsmart\zerocode\core\tests\customrunner\SimulatorState.java
Possible patterns: State

2. The design pattern finder tool appears to have an xml file with a list of pattern names. The tool then searches through what you specify for files and sees if they contains a name of a pattern mentioned in any of the files. Its really just a simple string comparison.

3. We don't believe the process the tool uses is correct, for example in java there is the string builder library that can be utilized in your code. Since that string would show up in the search it might flag our file as using the builder design pattern which it might not be using. If we were to design a program that finds design patterns it might be a good plan to start and see if project files contain those design pattern keywords. We could also monitor the memory addresses that the program accesses and how the memory is changed by the program. Following those memory patterns might indicate a design pattern. Realistically, it would probably have to be a combination of a few different ways analyzing the code.

Question 2:

1. We used the web interface to upload the files for the most part.
2. We used git clone, echo "test file" >> test.txt, git add, git commit -m and git push.
    Attached is a screenshot of each of those outputs and a screenshot of the github
    Link to github : https://github.com/jessejohn01/ESOF322 (Can't click on paper but..)

```
Jesse J Arstein@Sasha MINGW64 /d/College Files/Fall 2019/Software Engineering/HW4/github (master)
$ cd ESOF322

Jesse J Arstein@Sasha MINGW64 /d/College Files/Fall 2019/Software Engineering/HW4/github/ESOF322 (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean

Jesse J Arstein@Sasha MINGW64 /d/College Files/Fall 2019/Software Engineering/HW4/github/ESOF322 (master)
$ echo "test file" >> test.txt

Jesse J Arstein@Sasha MINGW64 /d/College Files/Fall 2019/Software Engineering/HW4/github/ESOF322 (master)
$ git add test.txt
warning: LF will be replaced by CRLF in test.txt.
The file will have its original line endings in your working directory

Jesse J Arstein@Sasha MINGW64 /d/College Files/Fall 2019/Software Engineering/HW4/github/ESOF322 (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   test.txt

Jesse J Arstein@Sasha MINGW64 /d/College Files/Fall 2019/Software Engineering/HW4/github/ESOF322 (master)
$ git push
Everything up-to-date

Jesse J Arstein@Sasha MINGW64 /d/College Files/Fall 2019/Software Engineering/HW4/github/ESOF322 (master)
$ git commit -m "Added test file"
[master 8206521] Added test file
 1 file changed, 1 insertion(+)
 create mode 100644 test.txt

Jesse J Arstein@Sasha MINGW64 /d/College Files/Fall 2019/Software Engineering/HW4/github/ESOF322 (master)
$ git status
On branch master
Your branch is ahead of 'origin/master' by 1 commit.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean

Jesse J Arstein@Sasha MINGW64 /d/College Files/Fall 2019/Software Engineering/HW4/github/ESOF322 (master)
$ git push
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 289 bytes | 144.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/jessejohn01/ESOF322
   35b2df6..8206521  master -> master

Jesse J Arstein@Sasha MINGW64 /d/College Files/Fall 2019/Software Engineering/HW4/github/ESOF322 (master)
$
```

jessejohn01 / ESOF322

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⊙ 5 commits	⑂ 1 branch	◌ 0 releases	⚏ 1 contributor

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jessejohn01 Added HW		Latest commit f85b5a5 21 seconds ago
📁 HW1	Added HW	21 seconds ago
📁 HW2	Added HW	21 seconds ago
📁 HW3	Added HW	21 seconds ago
📄 README.md	Updated Readme	31 minutes ago
📄 test.txt	Added test file	9 minutes ago

▤ README.md   ✎

ESOF322

This repository contains assignments from ESOF322. Folders with their respective assignments will exist here.