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Question 1:

a).

- 1. YAJSW is a java alternative for tanuki java service wrapper. It implements a multitude of additional functions which could be easily extended.
- 2. YAJSW is a java centric implementation of the java service wrapper by tanuki. It aims at being mostly configuration compliant with the original. However, it adds additional items such as win64 support.
- 3. 56,453 lines of code. I did a simple java program that iterate through each file to count the lines

b).

1.

Found 59 files that possibly contain design patterns.

Possible patterns: Factory

Possible patterns: Factory

Possible patterns: Factory

Possible patterns: Factory

Possible patterns: Adapter

Possible patterns: Factory

 $\label{lem:condition} C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\ahessian\src\main\java\org\rzo\netty\ahessian\bootstrap\ChannelPipelineFactory.java$

Possible patterns: Factory

Possible patterns: Builder, Factory

C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\ahessian\src\main\java\ org\rzo\netty\ahessian\bootstrap\ChannelPipelineFactoryFactory.java Possible patterns: Factory

C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\ahessian\src\main\java\ org\rzo\netty\ahessian\crypto\StreamCipherFactory.java

Possible patterns: Factory

Possible patterns: Proxy

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\ahessian\src\main\java\ng\rzo\netty\ahessian\rpc\client\AsyncHessian\Proxy.java$

Possible patterns: Proxy

 $\label{lem:condition} C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\ahessian\src\main\java\org\rzo\netty\ahessian\rpc\client\Hessian\ProxyFactory.java$

Possible patterns: Factory, Proxy

Possible patterns: Proxy

C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\ahessian\src\main\java\org\rzo\netty\ahessian\rpc\client\SyncHessianProxy.java

Possible patterns: Proxy

Possible patterns: Factory

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\ahessian\src\main\java\valendrig\conetty\ahessian\session\Session\Factory.java$

Possible patterns: Factory

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\ahessian\src\main\java\valendrige\MulticastAdapter.java$

Possible patterns: Adapter

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\app\src\main\java\org\rz\ o\yajsw\app\WrapperManagerProxy.java$

Possible patterns: Proxy

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\build\src\main\java\org\rzo\builder\JarBuilder\java$

Possible patterns: Builder

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\build\src\main\java\org\rzo\builder\PolicyFileBuilder.java$

Possible patterns: Builder

Possible patterns: Factory

Possible patterns: Factory

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\hessian\src\main\java\com\caucho\hessian4\client\Hessian\Proxy.java$

Possible patterns: Proxy

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\hessian\src\main\java\com\caucho\hessian4\client\Hessian\ProxyFactory.java$

Possible patterns: Factory, Proxy

Possible patterns: Proxy

Possible patterns: Factory

C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\hessian\src\main\java\c om\caucho\hessian4\io\AbstractSerializerFactory.java

Possible patterns: Factory

Possible patterns: Factory

C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\hessian\src\main\java\c om\caucho\hessian4\io\ContextSerializerFactory.java

Possible patterns: Factory

 $\label{lem:condition} C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\hessian\src\main\java\com\caucho\hessian4\io\Envelope\Factory.java$

Possible patterns: Factory

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\hessian\src\main\java\com\caucho\hessian4\io\ExtSerializerFactory.java$

Possible patterns: Factory

Possible patterns: State

 $\label{lem:condition} C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\hessian\src\main\java\com\caucho\hessian4\io\HessianFactory.java$

Possible patterns: Factory

C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\hessian\src\main\java\c om\caucho\hessian4\io\HessianInputFactory.java

Possible patterns: Factory

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\hessian\src\main\java\com\caucho\hessian4\io\Iterator\Deserializer.java$

Possible patterns: Iterator

Possible patterns: Iterator

Possible patterns: Factory

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\hessian\src\main\java\com\caucho\hessian4\services\client\ServiceProxyFactory.java$

Possible patterns: Factory, Proxy

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\yajsw\src\main\java\io\netty\util\internal\logging\Internal\Logger\Factory.java$

Possible patterns: Factory

Possible patterns: Factory

Possible patterns: Factory

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\yajsw\src\main\java\io\netty\util\internal\logging\Simple\Logger\Factory.java$

Possible patterns: Factory

C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\yajsw\src\main\java\org \rzo\yajsw\action\ActionFactory.java

Possible patterns: Factory

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\yajsw\src\main\java\org\src\normain\java\org\src\$

Possible patterns: Factory

C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\yajsw\src\main\java\org \rzo\yajsw\groovy\WrapperBuilder.java

Possible patterns: Builder

C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\yajsw\src\main\java\org \rzo\yajsw\script\ScriptFactory.java

Possible patterns: Factory

Possible patterns: Factory

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\yajsw\src\main\java\org\src\yajsw\tray\Wrapper\Tray\Icon\Factory.java$

Possible patterns: Factory

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\yajsw\src\main\java\org\src\main\java\agsing\Adapter.java$

Possible patterns: Adapter

C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\yajsw\src\main\java\org \rzo\yajsw\util\ConfigurationLoggingAdapter.java

Possible patterns: Adapter

 $\label{lem:condition} C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\yajsw\src\main\java\org\rzo\yajsw\util\DaemonThreadFactory.java$

Possible patterns: Factory

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\yajsw\src\main\java\org\src\main\java\agg\src\main\java$

Possible patterns: Factory

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\yajsw\src\main\java\org\src\yajsw\util\Simple\Thread\Factory.java$

Possible patterns: Factory

Possible patterns: State

C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\yajsw\src\main\java\org \rzo\yajsw\wrapper\TrayIconProxy.java

Possible patterns: Proxy

C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\yajsw\src\main\java\org \rzo\yajsw\wrapper\WrappedProcessFactory.java

Possible patterns: Factory

 $C:\Users\Lin\Desktop\yajsw-stable-12.14\yajsw-stable-12.14\src\yajsw\src\main\java\org\src\wapped\Service\Factory.java$

Possible patterns: Factory

- 2. Once it is called, it has a for loop for each file, within this for loop, it will call another method to check if it contains patterns. It will use each pattern definition to check if it contains the pattern, if it does it will add to the list.
- 3. No. I found when the search in file content is checked, the code had another streamReader ReadToEnd code, which means the program was not reading all the way to the end. This means the program could be missing design patterns; however, it does mean the program will find the easier design patterns with a much better performance. I would do it the long way, looking for each design pattern and every time where instance of class are called. Although this is worst in performance, it will find every single design pattern.

Question 2

1. Once the repository has been created, there is an uploading an existing file included, which is where I could drag and drop. UserNames: LinShi11 muzhouchen

MINGW64:/c/Users/linsh/Desktop/ESOF-322-master/ESOF-322-master

```
1s
 ESOF-322-master/
  insh@DESKTOP-KG46E7G MINGW64 ~/Desktop/ESOF-322-master (master)
$ cd ESOF-322-master
   insh@DESKTOP-KG46E7G MINGW64 ~/Desktop/ESOF-322-master/ESOF-322-master (master)
$ git init
Initialized empty Git repository in C:/Users/linsh/Desktop/ESOF-322-master/ESOF-
322-master/.git/
  insh@DESKTOP-KG46E7G MINGW64 ~/Desktop/ESOF-322-master/ESOF-322-master (master)
$ git add .
warning: LF will be replaced by CRLF in README.md.
The file will have its original line endings in your working directory
  insh@DESKTOP-KG46E7G MINGW64 ~/Desktop/ESOF-322-master/ESOF-322-master (master)
$ git add README.md
linsh@DESKTOP-KG46E7G MINGW64 ~/Desktop/ESOF-322-master/ESOF-322-master (master)

$ git commit -m "All existing file"
[master (root-commit) 4af637e] All existing file

4 files changed, 3 insertions(+)
create mode 100644 Homework 1.pdf
create mode 100644 Homework 2.pdf
create mode 100644 Homework 3.pdf
create mode 100644 README.md
TINSN@DESKTOP-KG46E7G MINGW64 ~/Desktop/ESOF-322-master/ESOF-322-master (master) $ git push http://github.com/LinShill/ESOF-322.git master: version2 fatal: invalid refspec 'master:'
linsh@DESKTOP-KG46E7G MINGW64 ~/Desktop/ESOF-322-master/ESOF-322-master (master) $ git push http://github.com/Linshill/ESOF-322.git master:version2 warning: redirecting to https://github.com/Linshill/ESOF-322.git/Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 8 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 627.85 KiB | 22.42 MiB/s, done.
Total 6 (delta 0), reused 0 (delta 0)
remote:
remote:
remote: Create a pull request for 'version2' on GitHub by visiting:
remote: https://github.com/LinShi11/ESOF-322/pull/new/version2
 To http://github.com/LinShi11/ESOF-322.git
* [new branch] master -> version2
  insh@DESKTOP-KG46E7G MINGW64 ~/Desktop/ESOF-322-master/ESOF-322-master (master)
```