Setting up the development environment for YAWL

Programs

- Git

- Ant 1.9.4

- Java 1.8_261

- Tomcat 7.0.105

- PostgreSQL 12

Setup

- Clone YAWL sources using GIT: git clone https://github.com/yawlfoundation/yawl

- Set CATALINA_HOME and append bin to PATH:

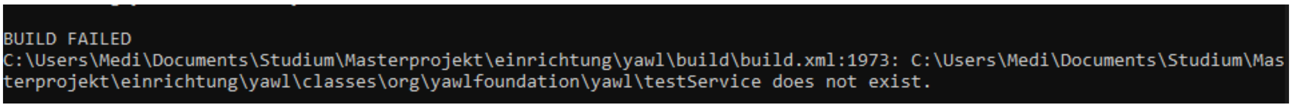
```
set CATALINA_HOME=C:\Program Files\apache-tomcat-7.0.105
set PATH=%CATALINA_HOME%\bin;%PATH%
```

- executing ant inside yawl\build throws a couple of warnings and fails with the message: checkSums doesn't support the "locations" attribute

- we have to add the following line in yawl\build\build.xml:2632

```
<unzip dest="${enumeratedClasses}">
        <fileset dir="${lib.dir}" includes="${commonsCodec}"/>
     </unzip>
     <mkdir dir="${temp.dir}/${proclet.app.name}${webinf.dir}/${proclet.app.name}/editor" /> <!-- NEW -->
     <jar destfile="${temp.dir}/${proclet.app.name}${webinf.dir}/${proclet.app.name}/editor/procletEditor.jar"
```

- executing „ant“ now works. „ant“ defaults to „ant buildWebApps“. If we want to deploy the built artifacts to our tomcat, we have to run „ant deployWebapps“. This, however, fails:



```
BUILD FAILED
C:\Users\Medi\Documents\Studium\Masterprojekt\einrichtung\yawl\build\build.xml:1973: C:\Users\Medi\Documents\Studium\Mas
terprojekt\einrichtung\yawl\classes\org\yawlfoundation\yawl\testService does not exist.
```

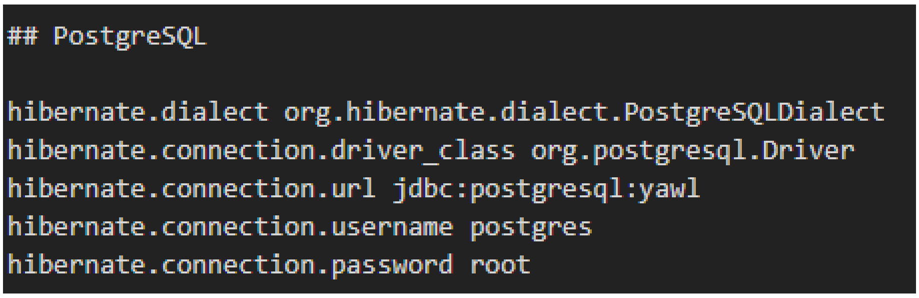
- fortunately, we dont really need the testService for now. So we create a new ant target:

```
<target name="deployWebappsWithoutTest"
     description="Build and deploy all web apps"
     depends="deployCoreWebapps,
              deployMonitorService,
              deployDigitalSignature,
              deployMailSender,
              deployCostService,
              deployTwitterService,
              deploySchedulingService,
              deployDocStore,
              deployProcletService,
              deployNonCoreSharedLibs">
</target>
```

- This does work and deploys the .war files to our configured tomcat.

- We can now start up tomcat using the bin/startup.bat . This will take some time and result in a couple of errors for documentStore, costService

- The error is thrown because of the missing hibernate connection configuration. We fix this by, for example, setting up a postgresql server on our local machine, creating a yawl database and configuring the connection in yawl\build\properties\hibernate.properties.postgres8
PostgreSQL is used by default.



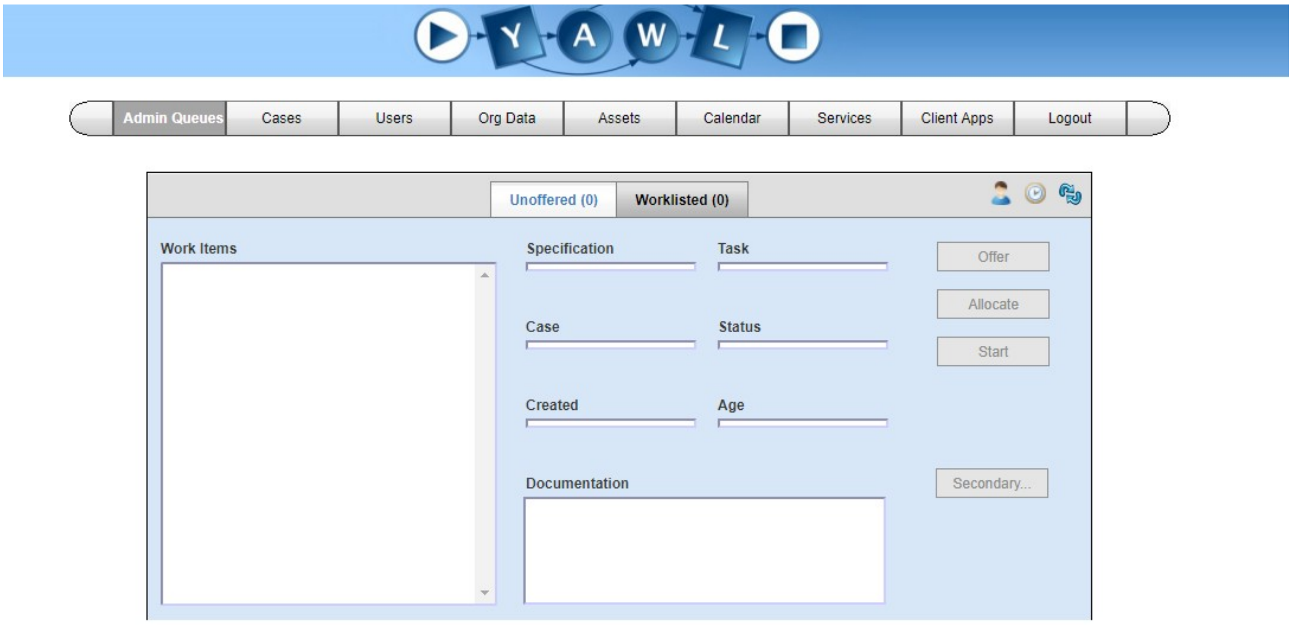
```
## PostgreSQL

hibernate.dialect org.hibernate.dialect.PostgreSQLDialect
hibernate.connection.driver_class org.postgresql.Driver
hibernate.connection.url jdbc:postgresql:yawl
hibernate.connection.username postgres
hibernate.connection.password root
```

- I just want to mention that the behavior of the ant build process has been rather non-deterministic: I deleted the yawl-directory, cloned it again, ran the exact same command that didn't work before (e.g. ant deployCostService) only to have it run without errors miraculously.

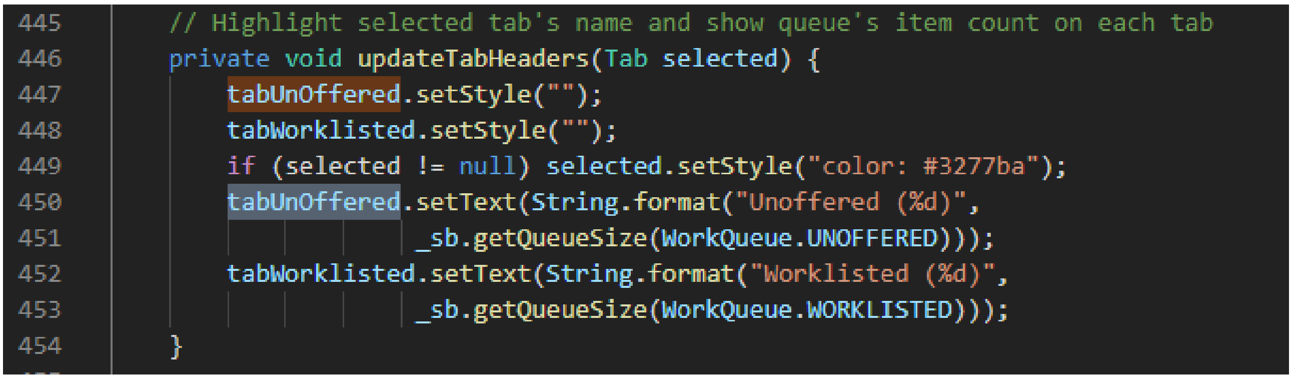
- we stop the tomcat, make sure postgres is running and execute „ant deployWebappsWithoutTest“, which should run without any errors

- afterwards we start up tomcat, who begins deploying the .war files, this time without any hibernate-errors

- we can check the application by opening a browser and going to http://localhost:8080/resourceService

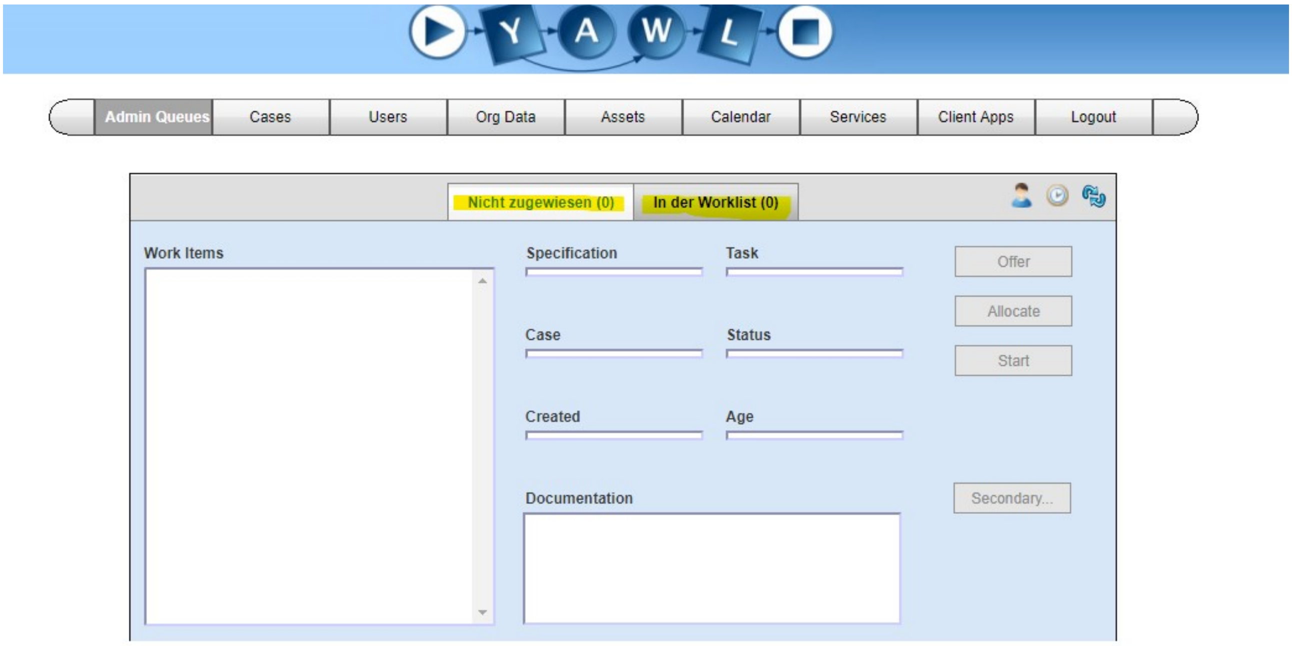


- We can now start implementing new features/changing the code. For starters we just want to change the labels „Unoffered“ and „Worklisted“. We find the corresponding lines of code: yawl\resourcing\jsf\adminQueues.java:446



```
445        // Highlight selected tab's name and show queue's item count on each tab
446        private void updateTabHeaders(Tab selected) {
447            tabUnOffered.setStyle("");
448            tabWorklisted.setStyle("");
449            if (selected != null) selected.setStyle("color: #3277ba");
450            tabUnOffered.setText(String.format("Unoffered (%d)",
451                          _sb.getQueueSize(WorkQueue.UNOFFERED)));
452            tabWorklisted.setText(String.format("Worklisted (%d)",
453                          _sb.getQueueSize(WorkQueue.WORKLISTED)));
454        }
```

- Changes in the code can be published by running „ant deployResourceService“. We have to login again because the session is no longer valid. Changes are live afterwards:


Y A W L
Admin Queues
Cases
Users
Org Data
Assets
Calendar
Services
Client Apps
Logout
Nicht zugewiesen (0)
In der Worklist (0)
Work Items
Specification
Task
Case
Status
Created
Age
Documentation
Offer
Allocate
Start
Secondary...