

Blackboard Developer Office Hour 4/5/17

### My Messages Building Block Java 8 Rebuild

The University of New Mexico (UNM) uses The Oselot Building Block My Messages.

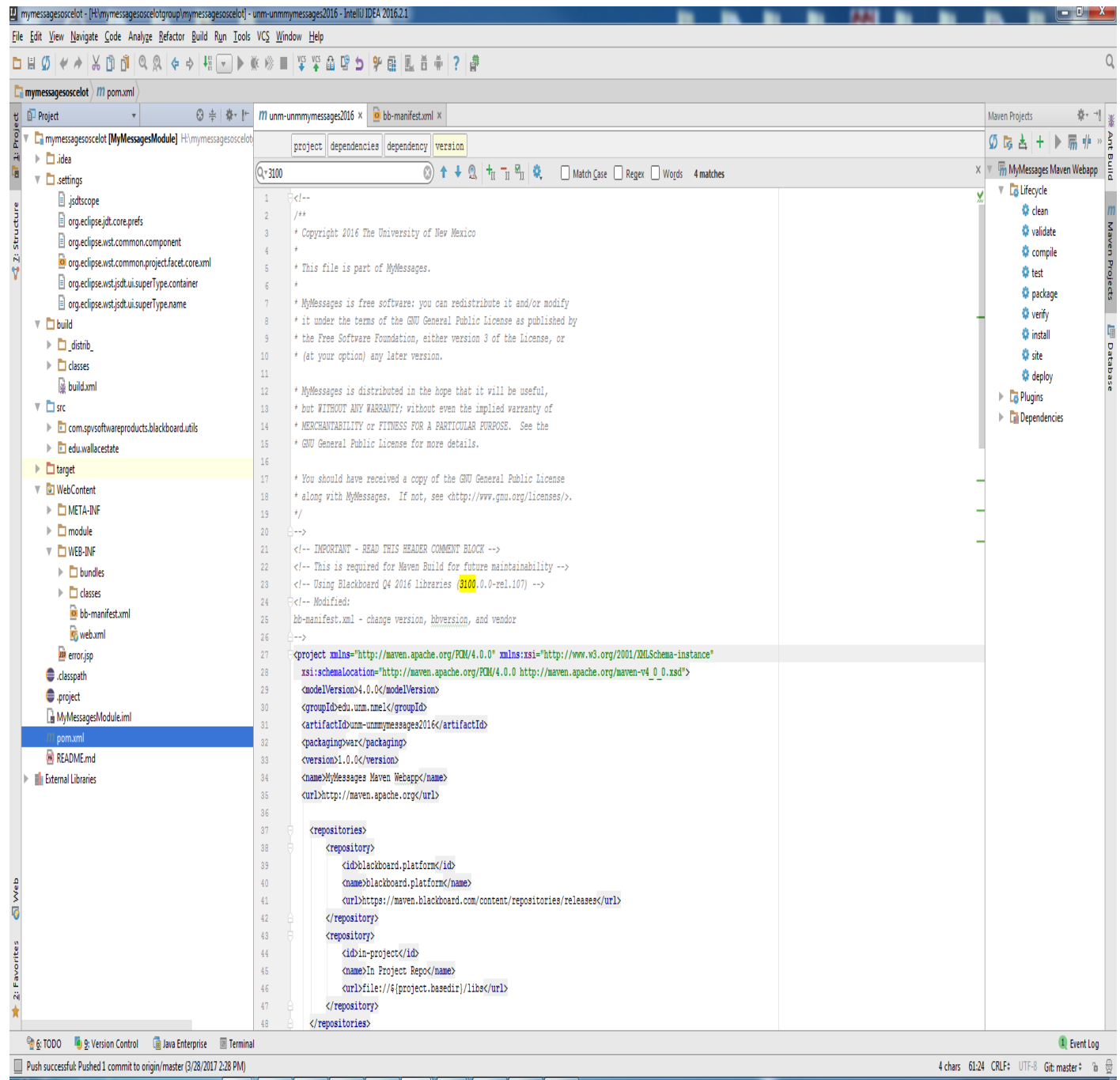
Realize that by Upgrading from Q4 2015 to Q4 2016 this Third Party Oselot Building Block may not function.

Contact Bruce Tenison - He no longer actively maintains My Messages

I rebuild in Java 8 to ensure future functionality to 'maintain' open source for Blackboard Learn Community.

## Used IntelliJ IDEA - JAVA IDE (Integrated Development Environment)

<https://www.jetbrains.com/idea/>



Added Maven for future maintainability – Open Source Apache build manager for Java projects

Maven - integrated with IntelliJ

Could also use Gradle since also integrated with IntelliJ

Learning how to use Maven with IntelliJ to rebuild a Custom Building Block took several months.

<https://maven.apache.org/guides/getting-started/maven-in-five-minutes.html>

The screenshot displays the IntelliJ IDEA IDE interface. The top toolbar includes standard development tools like File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, and Help. The left sidebar shows the Project Structure tree with folders like .idea, settings, build, src, target, WebContent, META-INF, module, WEB-INF, bundles, classes, bb-manifest.xml, web.xml, and error.jsp. The main editor window shows the pom.xml file with XML content. The right sidebar displays the Maven Projects panel with a Lifecycle view showing steps like clean, validate, compile, test, package, verify, install, site, and deploy. The bottom panel shows the Run console output for the command 'unn-unnmessages2016 [package]'. The output log indicates a successful build process, including assembly, war processing, and war building, with a total time of 5.397s and a final memory usage of 10M/245M. The process finished with exit code 0.

```
<!--  
/**  
 * Copyright 2016 The University of New Mexico  
 *  
 * This file is part of MyMessages.  
 *  
 * MyMessages is free software: you can redistribute it and/or modify  
 * it under the terms of the GNU General Public License as published by  
 * the Free Software Foundation, either version 3 of the License, or  
 * (at your option) any later version.  
 *  
 * MyMessages is distributed in the hope that it will be useful,  
 * but WITHOUT ANY WARRANTY; without even the implied warranty of  
 * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the  
 * GNU General Public License for more details.  
 *  
 * You should have received a copy of the GNU General Public License  
 * along with MyMessages. If not, see <http://www.gnu.org/licenses/>.  
 */  
-->  
<!-- IMPORTANT - READ THIS HEADER COMMENT BLOCK -->  
<!-- This is required for Maven Build for future maintainability -->  
<!-- Using Blackboard Q4 2016 libraries (3100.0.0-rel.107) -->  
<!-- Modified:  
bb-manifest.xml - change version, bbversion, and vendor  
-->  
<?xml version="1.0" encoding="UTF-8" ?>  
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-v4_0_0.xsd">  
  <modelVersion>4.0.0</modelVersion>  
  <groupId>edu.unm.nml</groupId>  
  <artifactId>unn-unnmessages2016</artifactId>  
  <packaging>war</packaging>  
</project>
```

```
[INFO] Assembling webapp [unn-unnmessages2016] in [H:\mymessageoscelotgroup\mymessageoscelot\target\unn-unnmessages2016]  
[INFO] Processing war project  
[INFO] Webapp assembled in [536 ms]  
[INFO] Building war: H:\mymessageoscelotgroup\mymessageoscelot\target\unn-unnmessages2016.war  
[INFO] -----  
[INFO] BUILD SUCCESS  
[INFO] -----  
[INFO] Total time: 5.397s  
[INFO] Finished at: Fri Mar 31 10:42:33 MDT 2017  
[INFO] Final Memory: 10M/245M  
[INFO] -----  
  
Process finished with exit code 0
```

## Used Blackboard Q4 2016 libraries

```
<repositories>
  <repository>
    <id>blackboard.platform</id>
    <name>blackboard.platform</name>
    <url>https://maven.blackboard.com/content/repositories/releases</url>
  </repository>

<dependencies>
  <dependency>
    <groupId>blackboard.platform</groupId>
    <artifactId>bb-cms-admin</artifactId>
    <version>3100.0.0-rel.107</version>
    <scope>provided</scope>
  </dependency>
```

myessagesoscelot - [H:\myessagesoscelotgroup\myessagesoscelot] - unmmessages2016 - IntelliJ IDEA 2016.2.1

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

myessagesoscelot pom.xml

Project myessagesoscelot [MyMessagesModule] H:\myessagesoscelot

- idea
- settings
  - jsdtscope
  - org.eclipse.jdt.core.prefs
  - org.eclipse.wst.common.component
  - org.eclipse.wst.common.project.facet.core.xml
  - org.eclipse.wst.jsdt.ui.superType.container
  - org.eclipse.wst.jsdt.ui.superType.name
- build
  - \_distib
  - classes
  - build.xml
- src
  - com.spsoftwareproducts.blackboard.utils
  - edu.wallacestate
- target
  - WebContent
    - META-INF
    - module
      - edit.jsp
      - savedata.jsp
      - view-noajax.jsp
    - WEB-INF
      - bundles
      - classes
      - bb-manifest.xml
      - web.xml
      - error.jsp
- classpath

unmmessages2016 x bb-manifest.xml x

project dependencies dependency version

3100

Match Case Regex Words 4 matches

```
</repositories>
<dependencies>
  <dependency>
    <groupId>blackboard.platform</groupId>
    <artifactId>bb-cms-admin</artifactId>
    <version>3100.0.0-rel.107</version>
    <scope>provided</scope>
  </dependency>
  <dependency>
    <groupId>blackboard.platform</groupId>
    <artifactId>bb-platform</artifactId>
    <version>3100.0.0-rel.107</version>
    <scope>provided</scope>
  </dependency>
  <dependency>
    <groupId>blackboard.platform</groupId>
    <artifactId>bb-taglibs</artifactId>
    <version>3100.0.0-rel.107</version>
    <scope>provided</scope>
  </dependency>
  <dependency>
    <groupId>javax.servlet</groupId>
    <artifactId>servlet-api</artifactId>
    <version>2.5</version>
    <scope>provided</scope>
  </dependency>
</dependencies>
```

Run unmmessages2016 [package]

[INFO] Assembling webapp [unmmessages2016] in [H:\myessagesoscelotgroup\myessagesoscelot\target\unmmessages2016]

[INFO] Processing war project

[INFO] Webapp assembled in [536 msec]

[INFO] Building war: H:\myessagesoscelotgroup\myessagesoscelot\target\unmmessages2016.war

[INFO] -----

[INFO] BUILD SUCCESS

[INFO] -----

[INFO] Total time: 5.397s

[INFO] Finished at: Fri Mar 31 10:42:33 MDT 2017

[INFO] Final Memory: 10M/245M

[INFO] -----

Process finished with exit code 0

Push successful: Pushed 1 commit to origin/master (3/28/2017 2:28 PM)

621 CRLF UTF-8 Git master

## Plans

Plan to post WAR file, source files, and My Messages Installation/Configuration documentation to Oselot after after our Learn Production Upgrade this May!

## Limitations

My Messages is NOT supported to run on Blackboard Learn Ultra. This may be available in the future with Blackboard Developer Community support.

## Contact

Robert Seletsky [rseletsk@unm.edu](mailto:rseletsk@unm.edu)

University of New Mexico IT – Academic Technology <http://extendedlearning.unm.edu/>