

Component-based systems - Assignment 2

OSGiLab with PaxAsteroids

Had a problem with running the program since it gets stuck on the following "Listening for transport dt_socket at address: 5005" when it should start the Apache Felix Gogo shell.

Running an older version of PaxAsteroids works flawlessly.

g! lb lists all the bundles and we can start and stop bundles with their respective IDs.

SpringLab with AsteroidsServiceLoader

Started with a new JavaLab project with AsteroidsServiceLoader. The following beans files that we register are:

- AsteroidBeans.xml
- CollisionBeans.xml
- CoreBeans.xml
- PlayerBeans.xml

In the XML files we have the following IDs that are tied to their class path.

- asteroidControlSystemBean
- asteroidPluginBean
- colliderBean
- playerControlSystemBean
- playerPluginBean

They are then used in Game.java with application context to call upon the modules.

```

public class Game implements ApplicationListener {
    ...
    ApplicationContext context = new ClassPathXmlApplicationContext("CoreBeans.xml");
    ...
}

public void create() {
    ...
    IGamePluginService asteroidPlugin = (AsteroidPlugin) context.getBean("asteroidPluginBean");
    IEntityProcessingService asteroidService = (AsteroidControlSystem)
context.getBean("asteroidControlSystemBean");
    pluginProcessors.add(asteroidPlugin);
    entityProcessors.add(asteroidService);

    IPostEntityProcessingService colliderPlugin = (Collider) context.getBean("colliderBean");
    postEntityProcessors.add(colliderPlugin);

    IGamePluginService playerPlugin = (PlayerPlugin) context.getBean("playerPluginBean");
    IEntityProcessingService playerService = (PlayerControlSystem)
context.getBean("playerControlSystemBean");
    pluginProcessors.add(playerPlugin);
    entityProcessors.add(playerService);
    ...
}

```

TestLab with AsteroidsServiceLoader

A simple JUnit test on the collision module was made in the AsteroidsServiceLoader. Right clicking the module and saying new JUnit test on an existing class gives us a nice template to start from. A new entity needed both a position part and radius and then the test ran without issue.

