[NetBeansLab1]
NetBeans Asteroids game

March 9, 2022

Introduction: In this assignment, we apply the NetBeans Platform in the Asteroid game setting.

Objectives: The objective of this assignment is to get familiar with the NetBeans module system, provide sufficient information to get started with CODA practice using NetBeans platform, and appreciate the component-oriented features of the NetBeans platform.

Homework:

- At minimal get acquainted with the Run-time Container and Lookup API by watching video part 1 and 2 at [Top 10 NetBeans APIs tutorials]. Note, some of the tutorials are a bit outdated but most of them are still valid.

Classwork: I expect you to focus on the NetBeans module system. For those of you who are interested in Rich Client Development using the NetBeans platform I can recommend the full book [Boc11].

- Always remember to pull in changes from the shared GitHub repository.

- Try the get the minimal Run-time Container running. That is, the following modules: `org-netbeans-bootstrap`, `org-openide-filesystems`, `org-netbeans-core-startup`, `org-openide-modules`, `org-openide-util` and `org-openide-util-lookup`. See [NBRuntimeExample].

- Port the components from previous [JavaLab] and use the NetBeans `@Serviceprovider` annotation to register the services and the `Lookup` to find the service providers.

- Use following maven archetype for setup of Netbeans platform in the IDE:
  `org.apache.netbeans.archetypes:netbeans-platform-app-archetype:1.22`

- It can be run by the maven commandline as:
  ```
  mvn -DarchetypeGroupId=org.apache.netbeans.archetypes
      -DarchetypeArtifactId=netbeans-platform-app-archetype
      -DarchetypeVersion=1.22
      -DgroupId=<GROUP_ID> -DartifactId=<PROJECT_NAME>
      -Dversion=1.0-SNAPSHOT
      -DnetbeansVersion=RELEASE126
   org.apache.maven.plugins:maven-archetype-plugin:3.1.2:generate
  ```
  , see [MvnCLI]

- Use following maven archetype from IDE for creating new Netbeans modules:
  `org.apache.netbeans.archetypes:nbm-archetype:1.17`

- To register the Core module main, create a Class that extends "ModuleInstall" and overrides the "restored()" method, see [AsteroidsNetbeansInstall].

- Register the class in the "manifest.mf" file using the "OpenIDE-Module-Install" tag, see [AsteroidsNetbeansManifest].

Literature:

[Boc11] Heiko Bock. *The Definitive Guide to NetBeans^{TM} Platform 7*. Apress, 2011. [Link].