Activity 1 – UML Diagrams and Tools Install

# Overview

The purpose of this activity is to research various UML design tools, as well as gain hands-on experience creating a UML Class Diagram, a UML Use Case diagram, and a UML Deployment diagram. During this activity, you will install and validate the Enterprise Java development tools that will be used in this course.

# Activity Directions

* Research 2–3 UML design tools available that support UML use case, class, sequence, activity, and deployment diagrams. Pick a tool to use in the class. In 100–200 words, provide the rational for choosing the tool, including its features. Refer to the Unified Modeling Language for more information on how to draw each of the various UML diagram types.
* Model the data attributes and behavior for a "thing" in the universe where a "thing" could be a game character, car, person, etc. Export the model as a table in a Microsoft Word document, and a UML Class diagram as an image file. The table and diagram should illustrate attribute names and data types.
* Given “any IoT system and business requirements,” draw a possible UML Use Case Diagram for an IoT Device and for an End User of the System. Export the diagram as an image file.
* Given a standard Java web application—for example, use a project from CST-235 or CST-341—draw a UML Sequence Diagram representing the components and interactions between a form post page, controller, business service, and data service. Export the diagram as an image file.
* Given a standard Java web application—for example, use a project from CST-235 or CST-341—draw a UML Deployment Diagram representing the deployment artifacts. Export the diagram as an image file.
* Install JDK and JBoss EAP tools per the "Tools Install Guide," provided in the Course Materials. Create a default “Hello World” Enterprise Java application and deploy the application to JBoss EAP. Take a screenshot of the output, ensuring that the screenshot has the browser's address bar in the shot.

# Deliverable

Create a project report in Word using the standard headings outlined below. Include all write-ups, tables, images, and screenshots. The project report should clearly and cleanly lay out deliverables.

*Project Report Headings*

**CST-361 Design Patterns in Java**

**Student Name:**

**Project Title:**

**Date:**

**Write-Up** (this section may be omitted for activities that do not specify a writing component)

**Deliverables** (insert all applicable tables, images, and screenshots below)

Submit the project report to the Learning Management System.