

CSE 219 : Recitation 6

UML Design with VioletUML

Notify your Recitation TA once you have completed this recitation such that they may verify your work.


Recitation Goal

In this recitation you will create two type of UML diagrams: *class diagrams* and *sequence diagrams*.

Introduction

The **Unified Modeling Language** (UML) is a standard means for representing object-oriented designs. The idea is that by designing a software system before building it, one can create more modular, flexible, and maintainable high quality work. There are a number of different types of UML diagrams, including UML Use Case diagrams, which are used for developing requirements, i.e. for **software specifications** (SRS) documents). For software design, the most commonly used types are UML *class diagrams*, which define class structures and relationships, and UML *sequence diagrams*, which define behavior.

Recitation Setup

- First, download  the VioletUML Editor (version 2.1.0) to some location where you can find it. This is a Java executable `.jar` that should start up right away. In this assignment, you will create two diagrams: (i) a UML class diagram, and (ii) a UML sequence diagram.
- Next, download this NetBeans project (`./Recitation6.zip`). It has working source code. Open it, run it, and examine the code.

Recitation Requirements

First generate a UML Class Diagram that represents the code provided in the project. Then, generate two UML sequence Diagrams. One for each button response, meaning what sequence of method calls results when each event is generated. Note that three images have been provided. Your Violet UML model diagrams should look like these when you are done. You can download the images here:

- UML class diagram (`./Recitation6ClassDiagram.png`)
- UML sequence diagram (for pausing) (`./Recitation6PauseSequenceDiagram.png`)
- UML sequence diagram (for starting) (`./Recitation6StartSequenceDiagram.png`)

One thing to note is that the software development process will usually be the reverse of what you are doing in today's recitation, i.e., you first design and then code. But today's exercise will give you a good idea of what the code may eventually look like, based on your design.

When you are done, show your work to the TAs in Violet UML, which should look just like the images provided.