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Phase One Report

The first aspect of design which we decided on was the general format for representing timelines. We decided to make timelines represented by a name and a TreeMap of events, where the key was the event’s start date and the value was the Event object itself. Our intention in doing this was to have them readily accessible in chronological order for easy display. Upon further reflection, this was probably not the best way to represent them, as the user now cannot create two events with the same start date without having one overwrite the other. Events can be of two types, atomic or durative, which both extend our general Event interface.

In order to save events to disk, we used the library XStream, which serializes objects and converts them to XML. We decided to use XStream because it offered an easy way to serialize objects in a format which we thought would be versatile and possibly useful for later on in the project. We wrote JUnit tests to check that both the events and the timelines which we were saving to disk could be loaded again correctly.

To create the GUI, we used JavaFX and the NetBeans SceneBuilder. Sharing similarities with Java Swing, and with enhanced compatability with Internet deployment tools, JavaFX was the tool of choice. While some of its graphing tools proved difficult to master in the time we were given, it did allow us to quickly create a functional GUI with data editing capabilities that communicated with the Timeline XML files and updated them in real time.

Problems arose with attempting to create dynamic GUI using JavaFX. Scene transitions were more difficult than they seemed, and attempts to read in information from the XML file dynamically proved very difficult. IDE glitches during development also impeded our progress, giving us runtime errors that cost us testing time and forced us to spend more time debugging than we had planned for. However, we created a solid backend and the basis of a functional GUI, with work to be done in phase 2 tying the two together into a unified, more fully fleshed out product.