Requirements and Analysis Document for Visualista (RAD)

Group 11

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This version overrides all previous versions.

1 Introduction

This section gives a brief overview of the project.

1.1 Purpose of application

The Visualista project aims to create a toolbox for a single artist, and give that user virtual tools to create a Visual Novel. For definition of a Visual Novel, see definitions, acronyms and abbreviations.

The application also aims to supply a graphical and logical interface from which a pre-created Visual Novel can be played by a single player.

1.2 General characteristics of application

The Application will be a desktop, stand alone (non-networked), single user application that will run on Windows, Mac and Linux platforms which support Java.

The application will supply tools to create a visual novel. This includes the ability to create and delete novels, create and delete scenes as well as create and delete actors. A user may only edit one scene at a time, and the application will only be able to load one Visual Novel at a time. All graphical content of the Visual Novel must be provided by the user. All actions within the Visual Novel must be defined by the user. There will be a very limited (>15) amount of preset actors for the user to use within their Visual Novel. The application will support save and load functions for a Visual Novel. The application will support a graphical interface (GUI) to use with the tools. There will be mouse driven as well as keyboard controlled parts of the application.

The application will support a graphical interface to run a Visual Novel. There will be logical interpretations of actions defined in a Visual Novel. While playing a Visual Novel, any dynamic modifications of a scene will be temporarily saved.

1.3 Scope of application

The application will not support any online features.

The application will not support logical clauses (“if-clauses”) for actions defined by the user. The application will not support dynamic values in actions, with the exception of using an actor’s current position within a grid. The application will not use timed events, and will not be able to queue actions with a delay in between.

The application will not support saving the actions taken during the playing of a visual novel.

See Possible Future directions for a widened scope.

1.4 Objectives and success criteria of the project

1. The user can create a Visual Novel, and within this create and define scenes, actors and actions.
2. The user can save an edited Visual Novel, and later open it within the application, either to play it or to edit it.
3. The user can play a pre-created Visual Novel, and within it have expected results when clicking actors with defined actions.

1.5 Definitions, acronyms and abbreviations

For GUI definitions, please refer to the GUI sketch further below.

The definition of Visual Novel may vary depending on the source, but for the ease of the project the following definition is provided and to be used within the project.

- Visual Novel - A graphical interpretations of a story defined by a user, with limited user interaction and in most cases support for changing the story clientside. To be compared with a single player game without a goal, hence not meeting the real criteria for being defined as a game.

- GUI - Graphical user interface
- Java - Platform independent programming language
- JRE - Java Runtime Environment. The additional software required to run Java applications.
- MVC - Model-View-Controller. A code technique to avoid mixing of model and view code, with a middle part referred to as the controller.

- Novel - A gathering of multiple scenes. Could be compared with a project within other applications. A novel is the highest member in the hierarchy of a Visual Novel and contains the Metadata for all other members of the hierarchy.
- Scene - A scene contain a grid, a text field as well as a background image. A novel contains at least one scene, and a scene's grid is at least 1x1 large, but is not required to have a defined image or text. When a Visual Novel is played, one and only one scene can be active at a time, and is what is shown to the user.
- Grid - A grid is a *n* x *n* graphical interpretations of tiles, and is contained by a scene. A grid is always square, and need to be at least 1x1. Without a grid, a scene cannot exist. A grid holds no data on what its tiles contains, and have no actions bound to it.
- Tile - A tile is a single square with a defined size, currently set as 32 x 32

pixels, and contains an actor. Tiles may not under any circumstances lack an actor, and the definition “empty tile” is in fact a tile holding what is defined as the Shell Actor. A tile is responsible for pass on when it is clicked by the user, and to hold the data of its actor.

- Actor - An actor is a graphical representation of an object, and carries a number of actions. An actor is defined as placed once it is represented in a tile, and is otherwise uncallable. Actors are not responsible for supplying the data to the director, but are responsible for handing the actions to a tile upon request.
- Action - An action is contained within the actor, defined by the user creating or editing and can do one of the four following things:
    - Clear a tile. This is defined as setting the current actor in that tile to the Shell Actor.
    - Set the actor of a tile at a specified location to a predefined actor. The location may only be specified as an exact value, or the value of the tile containing the actor containing this action.
    - Update the text area of a predefined scene. This may be updated to an empty string, effectively clearing it. To see the definition of the text area, see the GUI sketch.
    - Change the current scene to another scene. This dynamically saves the current state of the current scene before changing.

2 Requirements

In this section we specify all requirements

2.1 Functional requirements

Create a list of high level functions here (from the use cases).
Create, save, open, rename Novels
Create, save, open (multiple), rename scenes belonging to a novel.
Also assocciate a text and a backdrop to a scene.
Create actors with an image, an action sequence and a name assocciated with them.
And then place them in a grid within a scene.
Lastly to clear a tile and to play a novel previously created.

2.2 Non-functional requirements

Possible NA (not applicable).

2.2.1 Usability

The user's ability to handle to program carries a large priority with it. The user should be able to, with a brief introduction, be able to use the program's main features without hesitation.

The program has to, at all times, give a clear and instructive view of the visual objects currently active. In the editor part of the program, the program also have to have a clear view of any object which can possibly be relevant, i e scenes and actors not currently used and/or in focus.

The program should only use grammatically and understandable english. There should be no non-user defined components in any language other than English, with local variants of it.

2.2.2 Reliability

NA

2.2.3 Performance

Any action taken by the user should have a response time of no more than 1 second. Any chained actions, such as showing an image, should have a complete runtime of no more than 3 seconds.

2.2.4 Supportability

There should be automated tests testing a large majority (>80%) of the code. The GUI should be tested manually, and any faulty tests to be reported in the final report, as well as notified in any relevant documents.

2.2.5 Implementation

The program runs on the standard Java Runtime Environment, and is using Java 7. Any computer which is purposed to run the program will have to have the Java Runtime Environment installed, with a version of Java no later than Java 7.

2.2.6 Packaging and installation

The program comes packaged in a standard .zip file, and within it are all the needed components to create and play a visual novel:

- A .jar file which is needed to start the program. The .jar file is a standard Java Runnable Jar file.
- A file containing all the needed icons, images and assets needed to start the program.
- A README.txt file for installation instructions, contact information and other information relevant to the receiver.

2.2.7 Legal

There should be no legal issues regarding the program, but any user defined data may fall into copyright and/or trademark issues. This is not covered by the program.

2.3 Application models

2.3.1 Use case model

See appendix for UML and explanatory text.

2.3.2 Use cases priority

- Create Novel
- Create Scene
- Create Actor
- Create Action
- Place Actor

2.3.3 Domain model

See appendix for domain model and explanatory text.

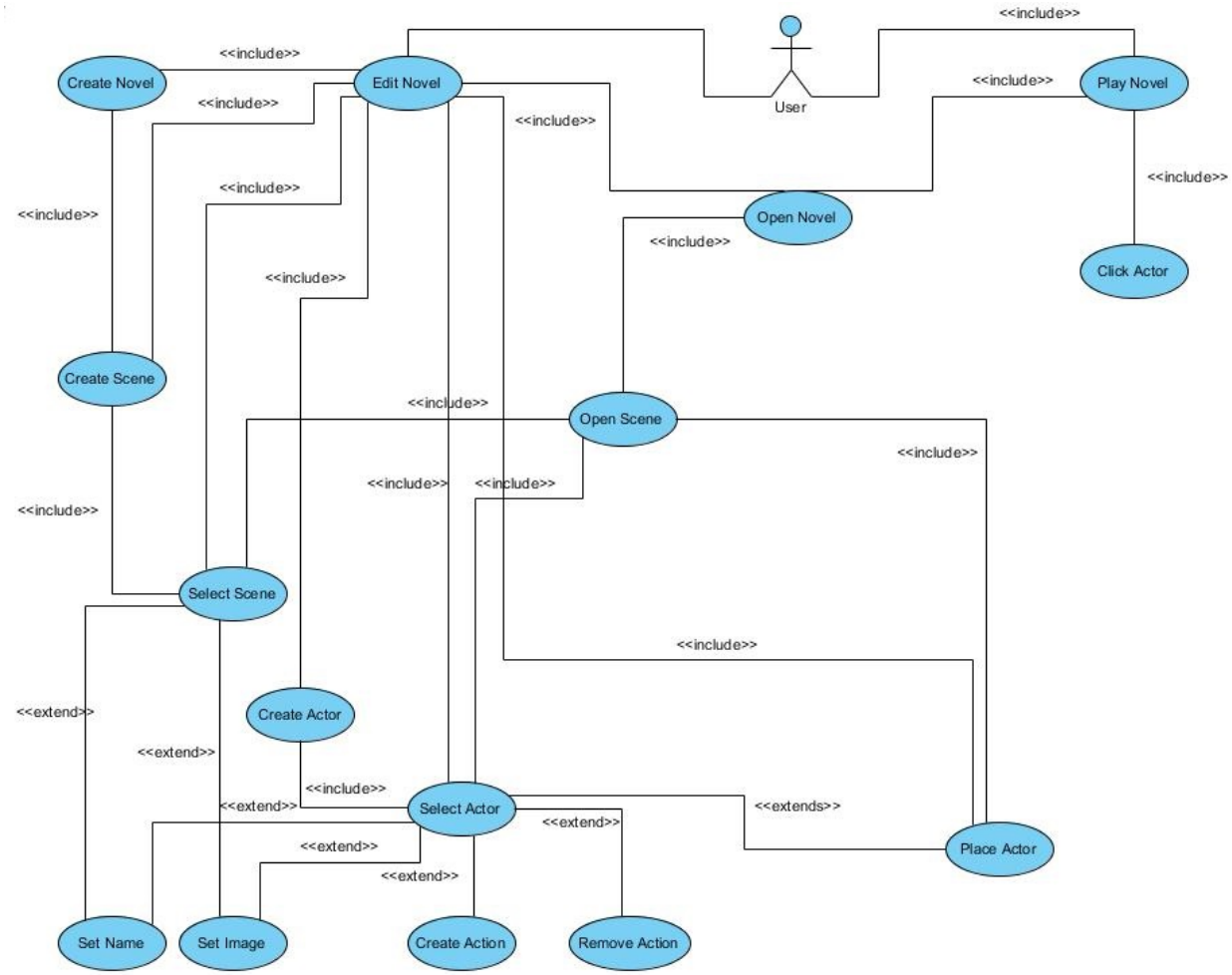
2.3.4 User interface

The program will use a fixed (non themable, non skinable) GUI in english. The GUI must be scalable to any realistic screen size and resolution. The GUI's user defined parts are not a part of this requirement.

2.4 References
NA

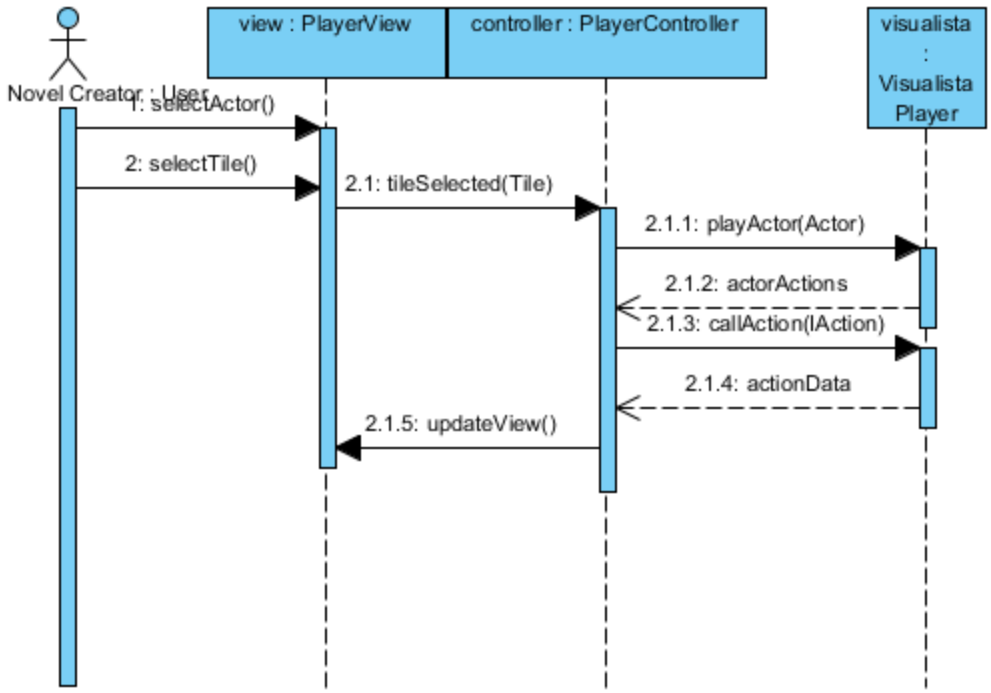
APPENDIX

Use Cases
Overview

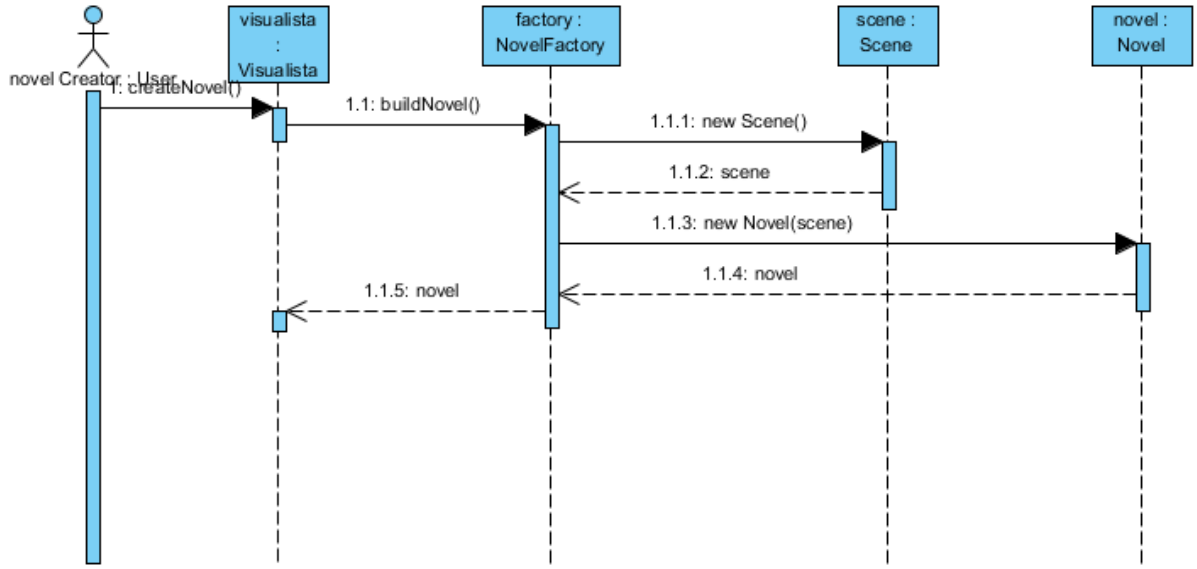


For detailed explanatory texts and documents, see the UseCases folder supplied with this document.

Sequence Diagrams
Below are the sequence diagrams, for two of the main Use Cases for the visualista application.



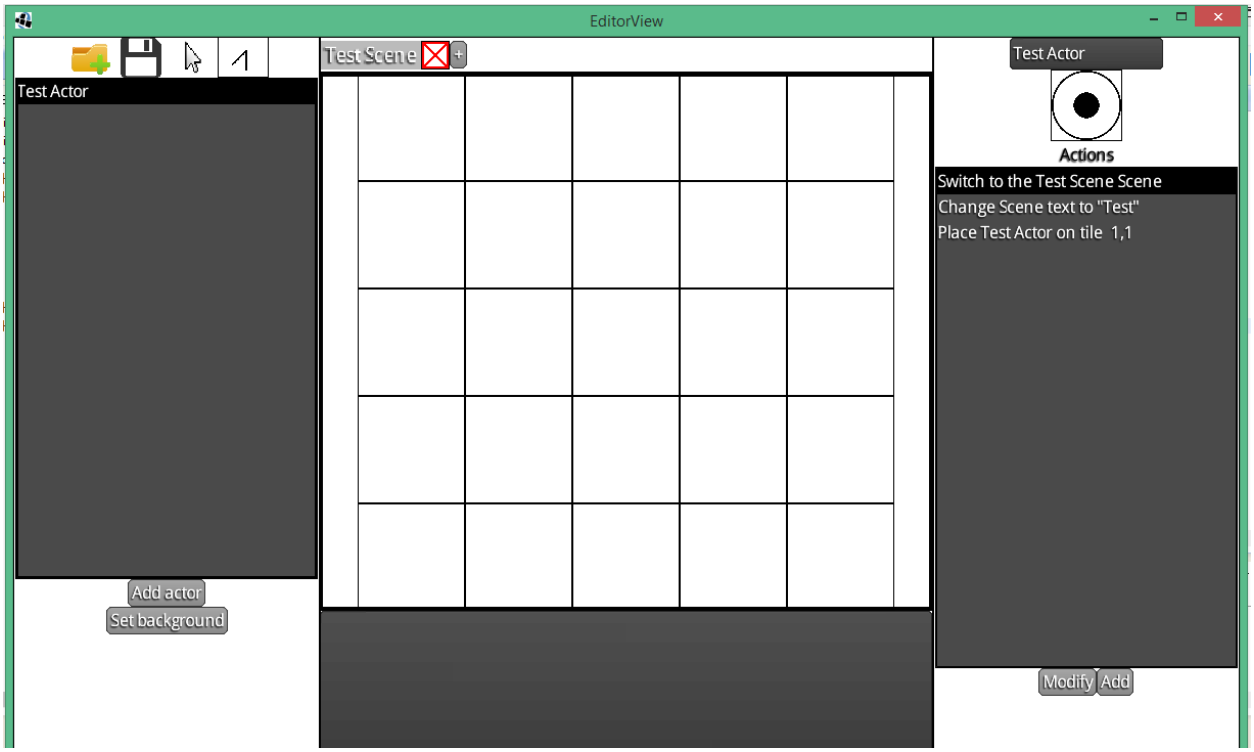
The Click Actor Use Case



The Create Novel Use Case

GUI

Final Editor GUI



Final Player GUI

Domain Model

Final Simplified Domain Model