Magic Murder Mystery: An Android Application

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Design

1. Goal

Inspired by The Arcana and older text-based RPGs, Magic Murder Mystery is a fun yet impactful video game where users read through the story we wrote, choose their own dialogue options, customize their own character, and unlock different endings based on their approvals with different non-player controlled characters (NPCs). Users click through the story to progress.

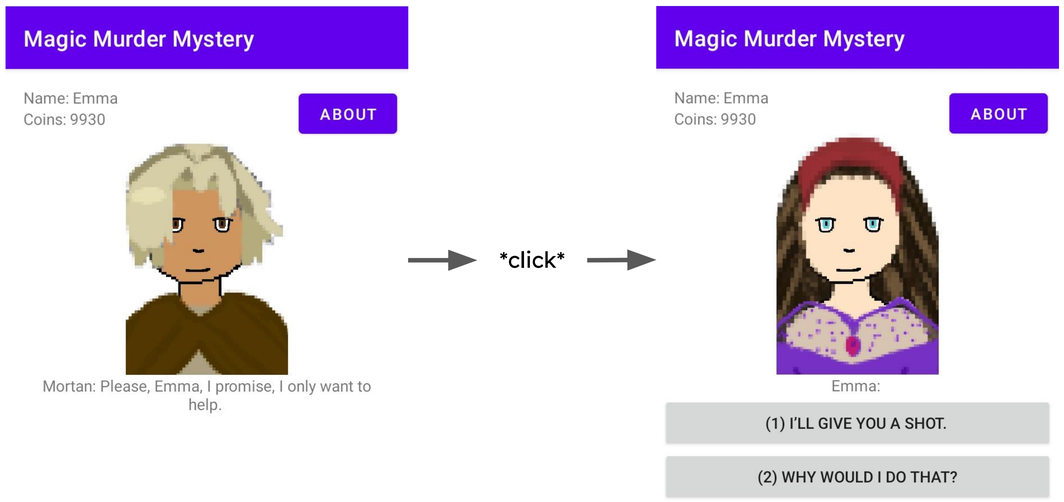

Figure 1: Story game play, showing different customization options and an example of a choice, presented as different buttons

2. Methodology

We used an agile approach to make the app through 5 iterations. The app started off as a text-based Java game in order to get the basic features ready. Using that code, we moved to an image-based Android application coded in Java.

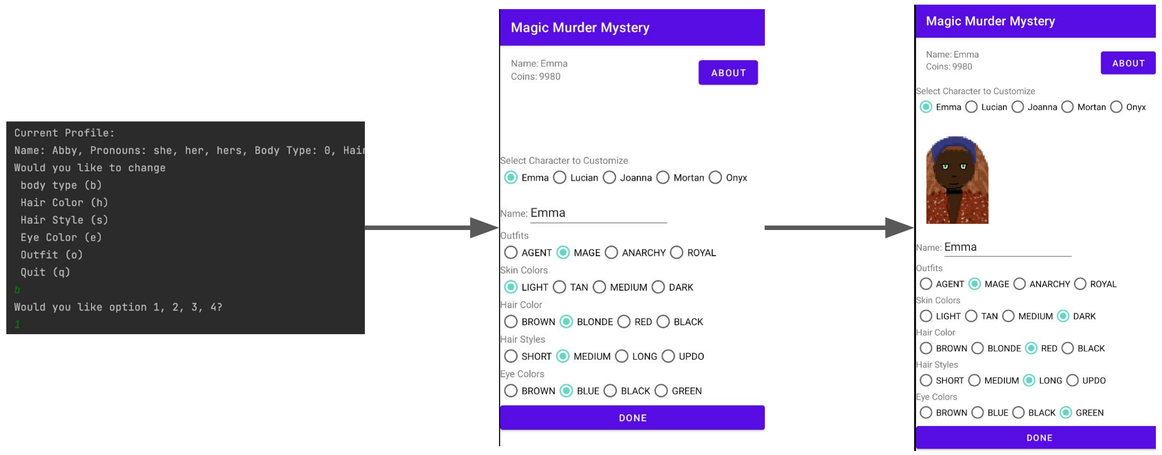

Figure 2: Transformation from completely text based to image based

Implementation

3. Architecture

In order to keep the app updatable and internationalizable, we keep a model view controller design. Below is an example of how the controller (MainActivity) works with the model (NPCharacter) and view (CustView). Figure 4 was created using UML. We used an object oriented design.

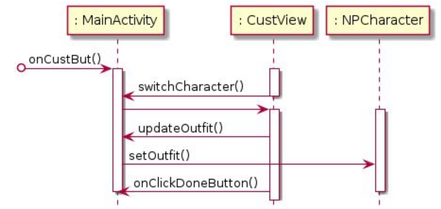

Figure 4: Controller, View, and Model interaction example

4. Chapter Data Structure

To ensure the story can branch out, we created a new data structure to accommodate the chapter implementation. Using a linked list as a starting point, we created a network that can diverge and then remerge. We stored the text for the chapters in XML files and, using XmlResourceParser, put the information into our network, creating chapters and pages.

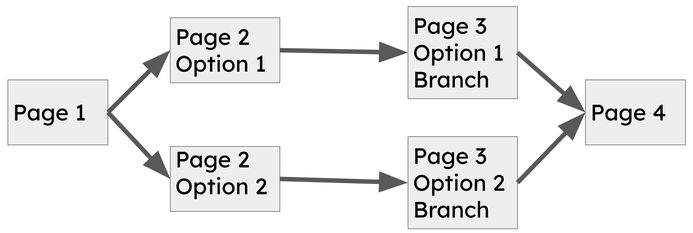

Figure 5: Pages that make up a chapter and their connections to each other

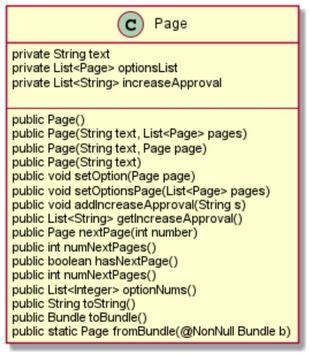

Figure 6: Page class diagram

5. Takeaways & Future Ideas

1. Overall, we enjoyed designing and creating our app. It's a fun way to show our skills!
2. We had trouble with developing and implementing the data structure for chapters as well as implementing XML files. Since the XML files contain so much data, the way we initially stored them made the app slow. We had to re-think our chapter data storage.
3. In the future we hope to make the app available for IOS.
4. We would also like to work to further support internationalization.

6. Acknowledgements

Thank you to Professor Rui Meireles for all the help with the app, poster, and inspiring us to present. Art by Grace Sutherland.

All the diagrams