

RPG Character Creator Documentation for UTM CSCI 352

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Abstract

This is an overview of the RPG Character Creator which allows the user to create a character for their next RPG journey, anyone from a DND enthusiast to a casual gamer can use this project to create their next character. This project is still in its planning stage and is a major work-in-progress.

1. Introduction

The RPG Character Creator will provide a way to plan out future RPG journeys. While it is not necessary to plan out your character in advance, doing so allows stronger focused characters that can make your experience better. With this application, we hope to give all RPG players from the most experienced veterans to new players a way to approach their RPGs with a plan.

1.1. A Note about RPG systems

By now those with experience in RPGs may be wondering how exactly will this application be helpful if every RPG has different rules and systems for character creation. Recreating every RPG system is entirely out the question as the work involved would be next to impossible, therefore, atleast for the beginning scope of the project we will be creating a generalized character creation containing only the most common aspects of a RPG character creation system.

1.2. Background

If you have reached this point of the document and are unclear of what a RPG is, let me explain. RPG stands for Role Playing Game and is a popular genre of video games which had its roots in pen-and-paper games such as Dungeon and Dragons many times just abbreviated as DND. These games put you in role of someone whether that be a predefined character or one that you created yourself.

1.3. Impacts

While this project might not be impactful to everyone, we hope that it might be useful to someone who wants to plan out their character for their next play-through of their favorite RPG.

1.4. Challenges

The challenges for this project that I could see being problems are as follows: - Becoming more acquainted with working with WPF applications. - Getting used to working in a good development workflow and efficiently working on the project not getting too behind. - Creating a efficient database that works well with our project. - Creating a easy to use GUI that works well for creating a new character. - Where before we would follow the directions of a project and fit to its guidelines, now we are the ones who are making the design decisions for the project.

2. Scope

I see the project being done when you can create multiple characters allowing you to pick the character name, class, attributes/stats, pick a portrait from a predefined set or import your own, and exporting a character sheet with all the previous information. If we finished that in a timely fashion, I could see us adding different rule sets for different popular game series such as Fallout or adding rules for DND 5e and possibly looking at adding a way to plan for choosing abilities and stats at level up. However, this would add quite a bit to the work load if we did happen to do that.

Use Case ID	Use Case Name	Primary Actor	Complexity	Priority
1	Add item to cart	Shopper	Med	1
2	Checkout	Shopper	Med	1

TABLE 1. SAMPLE USE CASE TABLE

2.1. Requirements

As part of fleshing out the scope of your requirements, you'll also need to keep in mind both your functional and non-functional requirements. These should be listed, and explained in detail as necessary. Use this area to explain how you gathered these requirements.

2.1.1. Functional.

- User needs to have a private shopping cart – this cannot be shared between users, and needs to maintain state across subsequent visits to the site
- Users need to have website accounts – this will help track recent purchases, keep shopping cart records, etc.
- You'll need more than 2 of these...

2.1.2. Non-Functional.

- Security – user credentials must be encrypted on disk, users should be able to reset their passwords if forgotten
- you'll typically have fewer non-functional than functional requirements

2.2. Use Cases

This subsection is arguably part of how you define your project scope (why it is in the Scope section...). In a traditional Waterfall approach, as part of your requirements gathering phase (what does the product actually *need* to do?), you will typically sit down with a user to develop use cases.

You should have a table listing all use cases discussed in the document, the ID is just the order it is listed in, the name should be indicative of what should happen, the primary actor is typically most important in an application where you may have different levels of users (think admin vs normal user), complexity is a best-guess on your part as to how hard it should be. A lower number in priority indicates that it needs to happen sooner rather than later. A sample table, or Use Case Index can be seen in Table 1.

Use Case Number: 1

Use Case Name: Add item to cart

Description: A shopper on our site has identified an item they wish to buy. They will click on a “Add to Cart” button. This will kick off a process to add one instance of the item to their cart.

You will then go on to (minimally) discuss a basic flow for the process:

- 1) User navigates to page listing desired item
- 2) User left-clicks on “Add to Cart” button.
- 3) User cart is updated to reflect the new item, this also updates the current total.

Termination Outcome: The user now has a single instance of the item in their cart.

You may need to also add in any alternative flows:

Alternative: Item already exists in the cart

- 1) User navigates to page listing desired item
- 2) User left-clicks on “Add to Cart” button.
- 3) User cart is updated to reflect the new item, showing that one more instance of the existing item has been added. This also updates the current total.

Termination Outcome: The user now has multiple instances of the item in their cart.

You will often also need to include pictures or diagrams. It is quite common to see use-case diagrams in such write-ups. To properly reference an image, you will need to use the `figure` environment and will need to reference it in your text (via the `ref` command) (see Figure 1). NOTE: this is not a use case diagram, but a kitten.

After fully describing a use case, it is time to move on to the next use case:

Use Case Number: 2

Use Case Name: Checkout

Description: A shopper on our site has finished shopping. They will click on a “Checkout” button. This will kick off a process to calculate cart total, any taxes, shipping rates, and collect payment from the shopper.

You will then need to continue to flesh out all use cases you have identified for your project.



Figure 1. First picture, this is a kitten, not a use case diagram

2.3. Interface Mockups

At first, this will largely be completely made up, as you get further along in your project, and closer to a final product, this will typically become simple screenshots of your running application.

In this subsection, you will be showing what the screen should look like as the user moves through various use cases (make sure to tie the interface mockups back to the specific use cases they illustrate).

3. Project Timeline

Go back to your notes and look up a typical project development life cycle for the Waterfall approach. How will you follow this life cycle over the remainder of this semester? This will usually involve a chart showing your proposed timeline, with specific milestones plotted out. Make sure you have deliverable dates from the course schedule listed, with a plan to meet them (NOTE: these are generally optimistic deadlines).

4. Project Structure

At first, this will be a little empty (it will need to be filled in by the time you turn in your final report). This is your chance to discuss all of your design decisions (consider this the README's big brother).

4.1. UML Outline

Show the full structure of your program. Make sure to keep on updating this section as your project evolves (you often start out with one plan, but end up modifying things as you move along). As a note, while Dia fails miserably at generating pdfs (probably my fault), I have had much success with png files. Make sure to wrap your images in a `figure` environment, and to reference with the `ref` command. For example, see Figure 2.

4.2. Design Patterns Used

Make sure to actually use at least 2 design patterns from this class. This is not normally part of such documentation, but largely just specific to this class – I want to see you use the patterns!



Figure 2. Your figures should be in the *figure* environment, and have captions. Should also be of diagrams pertaining to your project, not random internet kittens

5. Results

This section will start out a little vague, but it should grow as your project evolves. With each deliverable you hand in, give me a final summary of where your project stands. By the end, this should be a reflective section discussing how many of your original goals you managed to attain/how many desired use cases you implemented/how many extra features you added.

5.1. Future Work

Where are you going next with your project? For early deliverables, what are your next steps? (HINT: you will typically want to look back at your timeline and evaluate: did you meet your expected goals? Are you ahead of schedule? Did you decide to shift gears and implement a new feature?) By the end, what do you plan on doing with this project? Will you try to sell it? Set it on fire? Link to it on your resume and forget it exists?

References

- [1] H. Kopka and P. W. Daly, *A Guide to L^AT_EX*, 3rd ed. Harlow, England: Addison-Wesley, 1999.