

## How to Use this Template

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2. Rename this file: “**Capstone\_Stage1**”
3. Replace the text in green

## Submission Instructions

1. After you’ve completed all the sections, download this document as a PDF [ File → Download as PDF ]
2. Create a new GitHub repo for the capstone. Name it “**Capstone Project**”
3. Add this document to your repo. Make sure it’s named “**Capstone\_Stage1.pdf**”

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[Description](#)

[Intended User](#)

[Features](#)

[User Interface Mocks](#)

[Screen 1](#)

[Screen 2](#)

[Key Considerations](#)

[How will your app handle data persistence?](#)

[Describe any corner cases in the UX.](#)

[Describe any libraries you’ll be using and share your reasoning for including them.](#)

[Describe how you will implement Google Play Services.](#)

[Next Steps: Required Tasks](#)

[Task 1: Project Setup](#)

[Task 2: Implement UI for Each Activity and Fragment](#)

[Task 3: Your Next Task](#)

[Task 4: Your Next Task](#)

[Task 5: Your Next Task](#)

**GitHub Username:** emgcar

# Your App Name Here

## Description

This app aids in the creation and maintenance of Dungeons and Dragons characters (edition 3.5). No more will players have to read several books in order to begin playing. The rules of character creation will be completely handled by this app.

## Intended User

This app is for people who play Dungeons and Dragons.

## Features

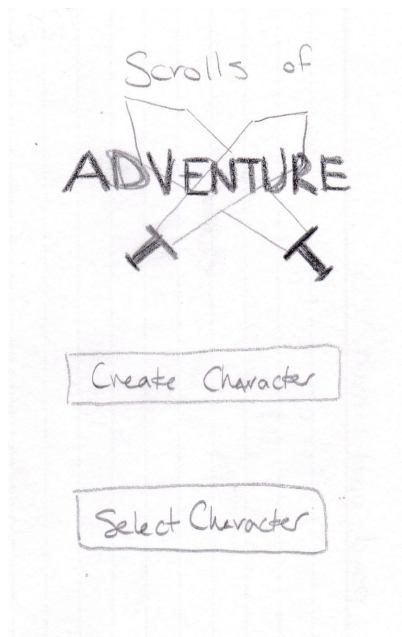
Main features of the app:

- Creates an edition 3.5 character (paid version allows for more than one character at a time)
- Can use the character throughout gameplay and will keep track of stats
- Can level up to level 20

## User Interface Mocks

These can be created by hand (take a photo of your drawings and insert them in this flow), or using a program like Photoshop or Balsamiq.

### Screen 1



This screen is the initial page that is shown on launch. The paid version is like this, the free version has a banner ad at the bottom. I have plans and some schematics for landscape and tablet versions, but I'm going to just show the paid, portrait, phone version.

## Screen 2

< Create Character < :

Name:

Gender: ☐ M ☐ F

Race:  ✓


Class:  ✓

str	dex	int	con	char	int
11	14	11	16	12	14

Alignment:  ✓

● ○ ○ ○ ○ ○

< Create Character < :

Cleric 

Base Attack Bonus: +0

Saving Throws:

Fortitude	+2
Reflex	+0
Will	+2


Abilities: spellcasting  
turn or rebuke undead

Proficiencies:

- all simple weapons
- all armor
- all shields

○ ● ○ ○ ○ ○

< Create Character < :

Fighter 

Base Attack Bonus: +1

Saving Throws:

Fortitude	+2
Reflex	+0
Will	+0

Proficiencies:

- all simple weapons
- all martial weapons
- all armor
- all shields

○ ● ○ ○ ○ ○

< Create Character < ::

Rogue

Base Attack Bonus: +0

Saving Throws:

Fortitude +0

Reflex +2

Will +0

Abilities: sneak attack 1d6  
trap finding

Proficiencies:

all simple weapons  
hand crossbow, rapier,  
sap, shortbow, short sword  
light armor

● ● ● ● ●

< Create Character < ::

Wizard

Select Spells

Select Familiar

Base Attack Bonus: +0

Saving Throws:

Fortitude +0

Reflex +0

Will +2

Abilities: scribe scroll

Proficiencies:

club, dagger, crossbow,  
quarterstaff

● ● ● ● ●

< Create Character < ::

Skills:

- bluff +5
- diplomacy +5
- escape artist +2
- forgery +5
- listen +5
- move silently +5

Feats:

Persuasive

choose feat

● ● ● ● ●

< Skills ::

Skill Points to Spend: 13

Concentration +13/-

Decipher Script +10/-

Knowledge +11/-

Spellcraft +14/-

< Feats < ::

Acrobatic

jump +2

tumble +2

Agile

Alertness

•  
•  
•  
•

< Create Character < ::

money: 1603510

inventory weight: 35 lb

\* load type

Select Weapons

Select Armor

Select Other

● ● ● ● ●

This set will be launched when the user clicks on “Create Character” from the initial screen. This screen has a lot of views in it. All of the ones topped with “Create Character” are all together. Depending on the class chosen, the second slide will be different (currently, I’m just supporting Cleric, Fighter, Rogue, and Wizard).

The option menu on the top will allow for deletion of the character and also completion of the character, which would launch the Screen 4 (below). Also clicking “Finish!” on the last screen will do this. Users cannot finish a character with fields missing, and there will be UI indicators for missing required fields.

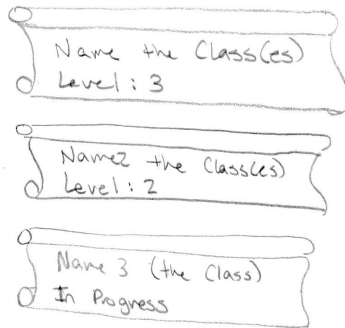
Everything is saved dynamically (on field exit), so the back button returns to the main menu, not the previous page, but everything is saved and set as “In Progress” in Screen 3 (below).

When choosing skills, the view will be using the one titled “Skills”. They on each change of skill point spent, the remaining total at top will be changed, with text and color changes to notify the user (gets red when reaches 0 points left).

When choosing from a list of things, many views will be like the one titled “Feats”. On start, the scrolls just show the title of each. On long click, the scrolls open to show a brief description. On regular click, the user selects that scroll.

## Screen 3

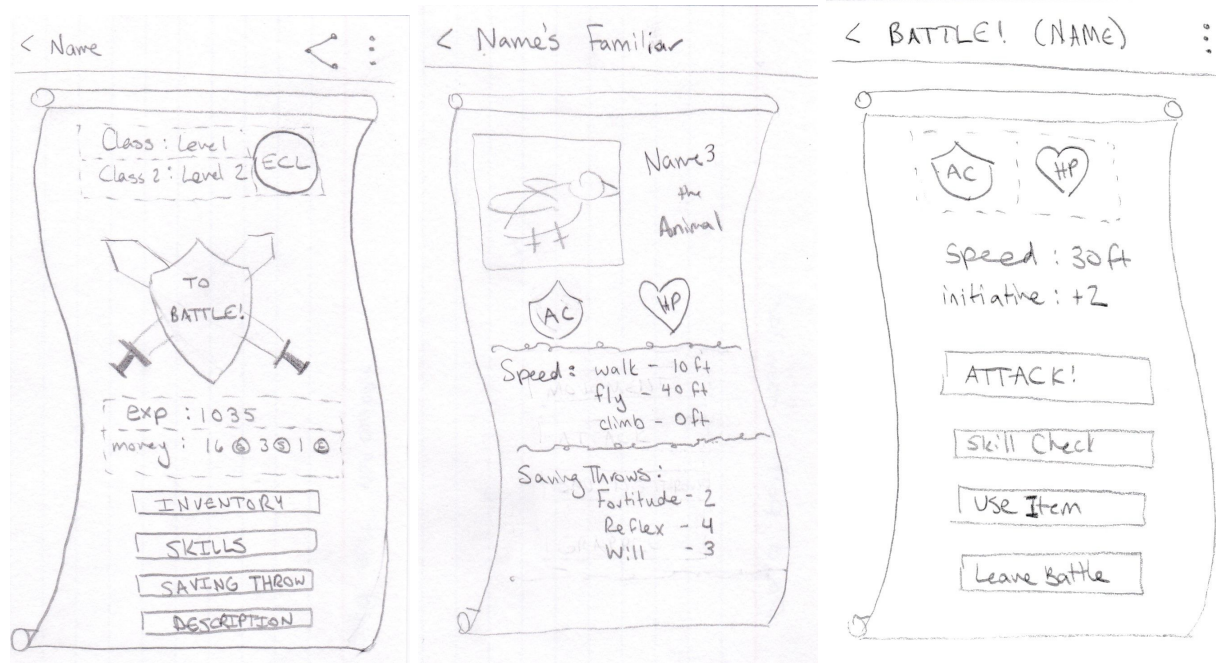
← Character Select



This set will be launched when the user clicks on “Select Character” from the initial screen. The free version will only allow one character scroll at a time. Users are allowed to delete and make a new character, as well as level the one character up as much as desired. However, to have more than one character at one time, they need the paid version. This is important because the people who would use my app often probably have more than one campaign, so they would benefit from the paid version. On the other hand, new players could learn the game with their one character, without needing too much commitment at the beginning.

The circle at the bottom is supposed to be a quill. I want it to have all of the functions of a FAB, with similar appearance, but with a quill instead of a plus. I think it helps add to the medieval experience i'm trying to provide the user.

## Screen 4



This is the set of screens available when the user selects a specific character. The dotted lines will be transparent to users, but on click will provide some actions or description messages.

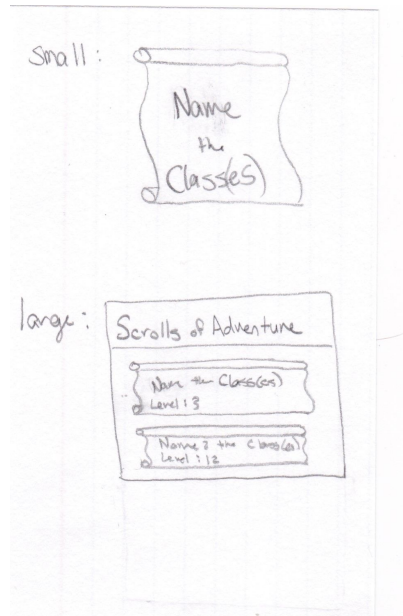
This first is to be used in non-combat situations. The user can click on the classes above for a description. The ECL is normally not a button, but will indicate when the user can level up, which can then be clicked to do so. The big shield in the middle can be clicked to go to the battle screen. Other items can be clicked to interact with, spend, roll, etc. (Not seen: I want to have a button about taking a rest because that heals damage. I also want to show the hit points on here)

The middle is the familiar's screen. The HP is the only interactive item on here because the familiar can take damage.

The third screen is the battle screen. This is really important because it will keep track of everything for the players, including HP, spells, attack modifiers, etc.



## Screen 5



These are the widget images (not to scale). I will have a small sized widget that looks like a scroll and displays the name and class(es). I hope to support multiple in case the user wants to have a widget for many characters. The large version will look like the “Select Character” screen, but with a few changes.

## Key Considerations

### How will your app handle data persistence?

I will build a content provider using SQLite. (In fact, I already started at the beginning of my nanodegree, and I have already set up a table for finished characters and a table for in-progress characters).

### Describe any corner cases in the UX.

In the character creation menu, I want the users to be able to slide between the different pages, but have the back button return to the “Select Character” menu. (I’ve already implemented this, but I wanted to note it was something I was considering).

### Describe any libraries you’ll be using and share your reasoning for including them.



Not sure about libraries right now. Most of my logic will be done locally.

### **Describe how you will implement Google Play Services.**

I plan to use Firebase for AdMob.

Another Google Service that would be cool is [com.google.android.gms.games.achievement](https://developers.google.com/android/gms/games/achievement) for achievements in game (like reaching levels, being all classes at least once, etc).

I plan to use Google Cloud Messaging (actually through Firebase) to notify the app when updates are available, specifically when more classes or more editions are ready. I would drop the non-user-editable tables, and update the user-editable tables including adding new ones. This would be done probably with an IntentService since the updates would be infrequent.

## **Next Steps: Required Tasks**

### **Task 1: Tasks I've Already Completed**

I started working on this when I was still in project 1 of this course, so I already have things done. I have implemented the following:

- Two databases with a content provider
  - One for finished characters (with non-null entries)
  - One for in progress characters (only the name is needed)
- Saving of several of the attributes to the in-progress characters, and transition to finished on complete.
- Randomization of Ability Scores with drag and drop interface to select which number goes where.
- Display of character stats on selection in "Select Character" layout.

### **Task 2: Implement UI for Each Activity and Fragment**

I need to build the UI for basically everything. I spent all of the time setting up the logic, and not making it look pretty, but most of this will be done in a later step. In this step, I will have a functioning app that displays all of the information with a rough setup like desired.

### **Task 3: Finish Creating Character**

In this step, I need to finish implementing all of the attributes to be selected upon character creation. I don't have all of them in both tables yet. In the process, I need to implement good selection methods in the "Create Character" layout.

### **Task 4: Run Character**

In this step, I will be implementing the functions to maintain the character during play, such as HP, spells prepared, spells used, etc, which all change throughout play. The above tables do not change throughout play. (I plan to implement several data tables).

### **Task 5: Leveling Up**

In this step, I will be implementing the ability to level up the character once they have reached the proper experience amount. This will allow for multi-classing.

### **Task 6: Set the Mood**

Previous to this step, I should have a functioning and nice looking app. It is here where I want to really set the mood with good illustrations, iconography, and backgrounds.

### **Task 7: Widget**

At this step, I will be implementing a small and large widget size.

Add as many tasks as you need to complete your app.

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