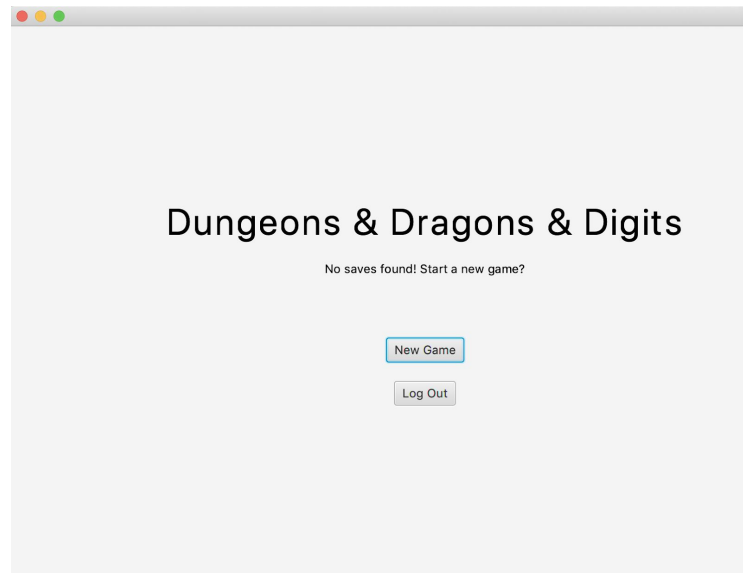- Showing Creation of Profile + Logging In

- ■
- ■ User chooses username and password, and clicks Create a profile, which brings them to the following screen
- ■ Show profile in server

- Showing How Log In Takes User to Main Menu Screen, Where They Can Start New Game

○

● Showing Initial Character Customization

■

■ Initially, the character has the same name as the user and is a human. Given random ability scores, class, and alignment. Start off at Level 1 with 0 XP.

Customize your character here!

Update your character name here: Priya

Elf ▼   Change Your Class Membership ▼

Change Your Weapon ▼   Change Your Alignment ▼

Update Character!

Name: Priya
Race: Elf
Alignment: Chaotic Good
Class: Fighter
Language : Elvish and Common

Strength: 14   Dexterity: 19
Constitution: 14   Intelligence: 14
Wisdom: 11   Charisma: 13

Speed : 30 feet
XP: 0 points
Level: 1
Weapon: Sword

CONTINUE

- ■
- ■ Upon changing race, new instance of character with that race is created which changes their language, alignment, speed etc.

Customize your character here!

Update your character name here: Paul

Halfling ▾   Fighter ▾

Claws ▾   Chaotic Good ▾

Update Character!

Name: Paul
Race: Halfling
Alignment: Chaotic Good
Class: Fighter
Language : Halfling and Common

Strength: 14   Dexterity: 14
Constitution: 16   Intelligence: 12
Wisdom: 11   Charisma: 10

Speed : 25 feet
XP: 0 points
Level: 1
Weapon: Claws

CONTINUE

- ■
  - ■ User can change the name of the character, their class, alignments, and weapon.
  - ■ This customization can occur during the game as well.
- ● Loading Saved Game

Dungeons & Dragons & Digits

An existing save was found:

Name: priya
Level: 1 (0 XP)
Race & class: Human Fighter
HP: 15

Continue

New Game

Log Out

  - ○
  - ○ Upon clicking continue, continues saved game
  - ○ Show Character and Saved Game for priya

```
ddd=# select * FROM "character" where game_id = 6;
 id | game_id | character_name | level | xp | race  |     language          | character_class | speed | hitpoints | strength | dexterity | constitution | intellig
ence | wisdom | charisma | active_weapon | healing_die | strength_modifier | dexterity_modifier | constitution_modifier | intelligence_modifier | wi
sdom_modifier | charisma_modifier
----+---------+----------------+-------+----+-------+-----------------------+-----------------+-------+-----------+----------+-----------+--------------+---
-----+--------+----------+---------------+-------------+-------------------+--------------------+-----------------------+------------------------+---
--------------+-------------------
 18 |       6 | priya          |     1 |  0 | Human | Common                | Fighter         |    30 |        15 |       15 |        17 |           15 |
 12 |     11 |       17 | Sword         |          10 |                 1 |                  2 |                     1 |                      0 |
     0 |                 2
 17 |       6 | pripri         |     1 | 30 | Dwarf | Dwarfish and Common   | Wizard          |    25 |        20 |       16 |        16 |           15 |
 12 |      7 |       12 | Wand          |          10 |                 2 |                  2 |                     1 |                      0 |
    -2 |                 0
 16 |       6 | p              |     1 |  0 | Dwarf | Dwarfish and Common   | Rogue           |    25 |        15 |       14 |        12 |           18 |
 14 |     11 |       12 | Bow           |          10 |                 1 |                  0 |                     2 |                      1 |
     0 |                 0
(3 rows)

ddd=#
```


● Showing that you cannot create a profile for an existing login

● Showing that you cannot sign in with an incorrect password

○

● Showing Standard Event Example

○

○ If you choose drink from pond…

○

- Showing Random Math Quiz Example

Grade 1

Solve this quiz in order to continue!

16 + 77 = ?

Enter your solution here: [93]

Correct!! You may now continue by clicking the button at the bottom!

[Submit]

Too hard? Try a new quiz:

[New Quiz]

Enter your grade level here! We support grades 1 through 5

[1] [Submit Grade Level]

[CONTINUE]

Grade 5

Solve this quiz in order to continue!

42780 ÷ 8556 = ?

Enter your solution here: [5]

Correct!! You may now continue by clicking the button at the bottom!

[Submit]

Too hard? Try a new quiz:

[New Quiz]

Enter your grade level here! We support grades 1 through 5

[5] [Submit Grade Level]

[CONTINUE]

Failing quiz - continue button invisible; message indicates solution is incorrect

Solve this quiz in order to continue!

49 - 6 = ?

Enter your solution here: [42]

Sorry, but that is incorrect. Please try again.

[Submit]

Too hard? Try a new quiz:

[New Quiz]

Enter your grade level here! We support grades 1 through 5

[1] [Submit Grade Level]

Successful Quiz - continue button appears; message indicates solution is correct

Solve this quiz in order to continue!

49 - 6 = ?

Enter your solution here: [43]

Correct!! You may now continue by clicking the button at the bottom!

[Submit]

Too hard? Try a new quiz:

[New Quiz]

Enter your grade level here! We support grades 1 through 5

[1] [Submit Grade Level]

[CONTINUE]

- Showing generation of multiple random quizzes (printed to the console)

```
Grade level = 1 | 2 + 3 = 5
Grade level = 2 | 65 + 719 = 784
Grade level = 3 | 43 / 43 = 1
Grade level = 4 | 951 / 951 = 1
Grade level = 5 | 3588 * 353 = 1266564
Grade level = 1 | 99 - 3 = 96
Grade level = 2 | 643 - 12 = 631
Grade level = 3 | 88 / 4 = 22
Grade level = 4 | 13 * 86 = 1118
Grade level = 5 | 66339 / 273 = 243
Grade level = 1 | 96 + 7 = 103
Grade level = 2 | 3549 + 9587 = 13136
Grade level = 3 | 6 / 6 = 1
Grade level = 4 | 440 / 110 = 4
Grade level = 5 | 617 / 196 = 3 R 29
Grade level = 1 | 20 + 30 = 50
Grade level = 2 | 418 + 9238 = 9656
Grade level = 3 | 9 * 9 = 81
Grade level = 4 | 5950 / 50 = 119
Grade level = 5 | 3078 / 400 = 7 R 278
Grade level = 1 | 6 - 3 = 3
Grade level = 2 | 218 - 57 = 161
Grade level = 3 | 6 * 3 = 18
Grade level = 4 | 59 * 31 = 1829
Grade level = 5 | 611 / 536 = 1 R 75
```

Difficulty progresses as expected with grade level

- Dice Rolling:

```
Rolling a 6-sided die: 6
Rolling a 20-sided die: 9
Rolling a 10-sided die 3 times and summing all the rolls: 10
Rolling a 20-sided die 10 times: [2, 9, 3, 8, 15, 16, 2, 17, 9, 19]
Rolling a 20-sided die with a minimum value of 15: 15
Rolling a 20-sided die with a minimum value of 15 (10 times): [17, 17, 16, 16, 15, 17, 20, 17, 20, 17]
```

All values fall within expected ranges

Testing combat

Combat creation and accurate outcome (JUnit):

Manual Combat testing:

● Making sure Combat occurs as one of the random events when choosing "venture" from the Game screen:
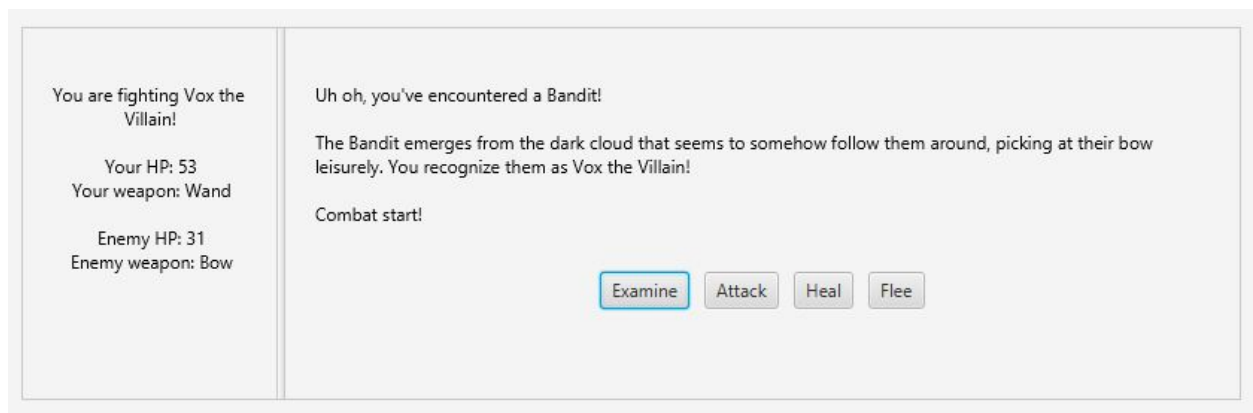
● Making sure Combat occurs when choosing "pick a fight" from the Game screen:
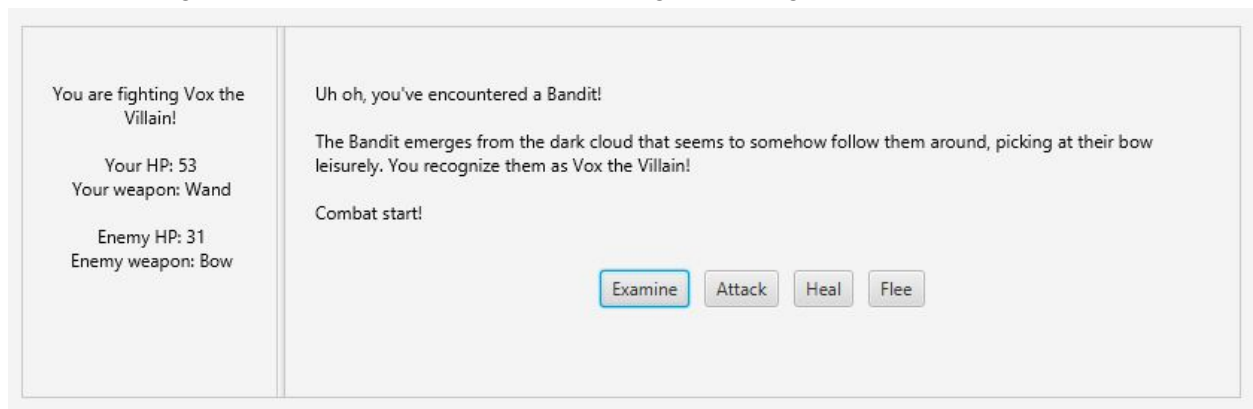
● Choosing "Examine" displays the Monster's unique description only once:

- Choosing attack prints a description of the player and enemy turn.
- Successfully landing an attack reduces HP by the damage dealt:

- When dodging, health is not reduced:

- Healing is allowed every 4 turns. When selected, the player regains the indicated amount of HP:

- Player must wait until cooldown is over to heal again and instead choose a different action:

- Reducing the opponent to 0 HP first wins the combat:

Manual standard event testing:
- Choosing to "venture" can produce a standard event with its unique 3 choices:

Name: Troy Bolton
Race & Class: Halfling Wizard
Level: 2 (434 XP)
HP: 121

Although you can tell by the height of the sun in the sky that it should be no later than midday, you soon find the sky quickly darkening around you.

Around you?

That's definitely not right. As your surroundings begin to grow darker and darker, you realize that it isn't because of the sky, but instead because of a heavy black cloud growing around you!

[Shout for help] [Run out of the fog] [Hold your breath]

- Choosing an option prints the outcome of that option:

Name: Troy Bolton
Race & Class: Halfling Wizard
Level: 2 (434 XP)
HP: 121

You force yourself to calm down and drop to a crouch, eyes closed and head in your hands. You suck in one last breath, and then hold it...

and hold it...

and hold it......and hold it. Amazingly, you manage to do it! When you next open your eyes, the darkness has cleared, and you are crouching in the middle of the road. Whoops! You quickly move out of the way. You glance behind you to see what could have caused that strange event, but there's no one else here except you and the trees.

You gained 15XP!

[Continue]

- Reward/consequence is given to the player:

(434 XP -> 449 XP)

Manual quiz event testing:

- Choosing "venture" can produce a quiz event where the player can choose to accept or refuse the challenge:

- Accepting the challenge shows the generated Math Quiz:

Solve this quiz in order to continue!

12 + 12 = ?

Enter your solution here: [|]

Submit

Too hard? Try a new quiz:

New Quiz

Enter your grade level here! We support grades 1 through 5

[ ] Submit Grade Level

● Successfully solving the problem rewards the player:

Name: Troy Bolton
Race & Class: Halfling Wizard
Level: 2 (481 XP)
HP: 123

You managed to solve the riddle!

You gained 2 Strength!

Return