Name: Grant Hulen

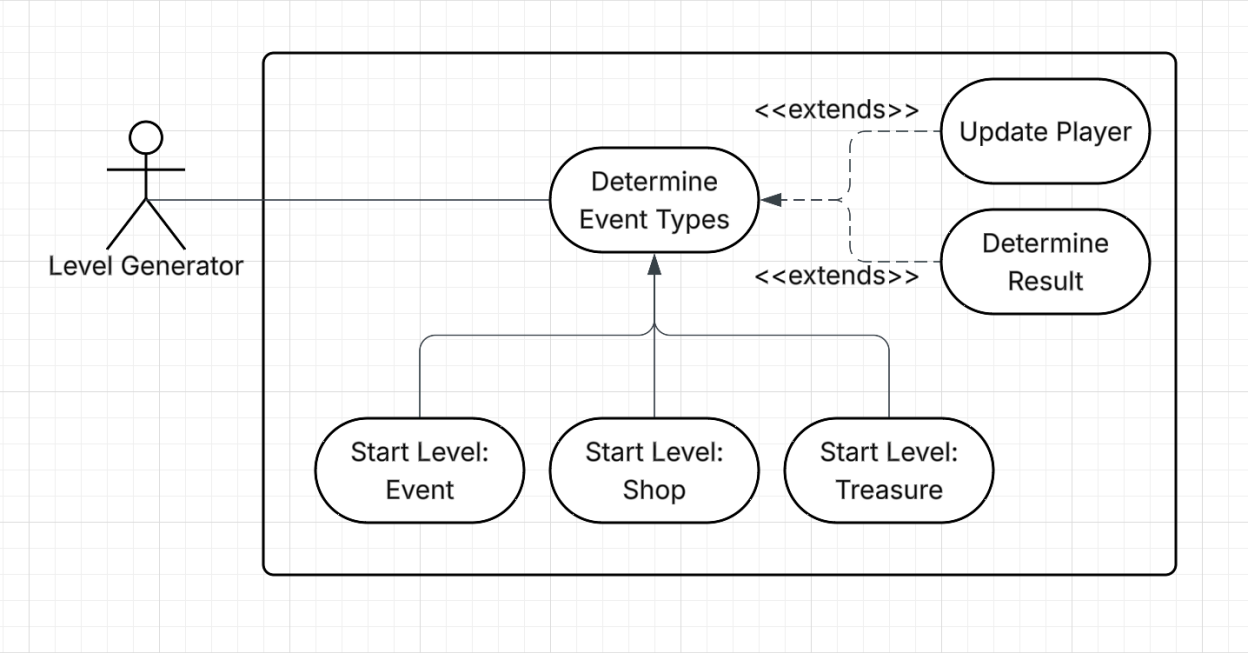
1. **Brief Introduction:**

   My feature for the Galleon Gambit video game is the system for non-combat based levels.

   The map of the game will be randomly generated at the beginning of the run, consisting of two types of levels: combat levels, and non-combat levels. My job is to randomly generate and create the non-combat levels. The non-combat levels fall into three categories.

   - **Events:** Events are small text based decisions that present the player with a scenario and a few options for how to proceed. The options available to the player will all have some positive and or negative effects on the rest of the run.
   - **Treasure:** Treasure levels are quick levels in which the player is presented with randomly determined rewards, consisting of card additions to the players deck or gold to add to the players inventory.
   - **The Shop:** Shop levels are places in which the player is presented with a random range of purchasable cards to add to their deck for the run. In addition players will be able to pay to remove unwanted cards from their deck.

2. Use Case Diagram and Scenario:



Scenario:

Name: Determine Event Types

Summary: The Level Generator will randomly determine one of three options for a non-battle level, run the level, and return the result while updating the player character.

Actors: Level Generator

Preconditions: Non-battle level chosen on map.

Basic Sequence:

1. Non-battle level chosen.
2. One of three levels are chosen at random.
3. For the type of level chosen a random encounter happens.
4. The result for the level is determined based on player interactions.
5. The inventory and statistics of the player are updated based on the result of the level.

Exceptions:

1. Battle based level is chosen.
2. Player choice does not affect their inventory or statistics.

Post Conditions: Player is updated and returns to map.

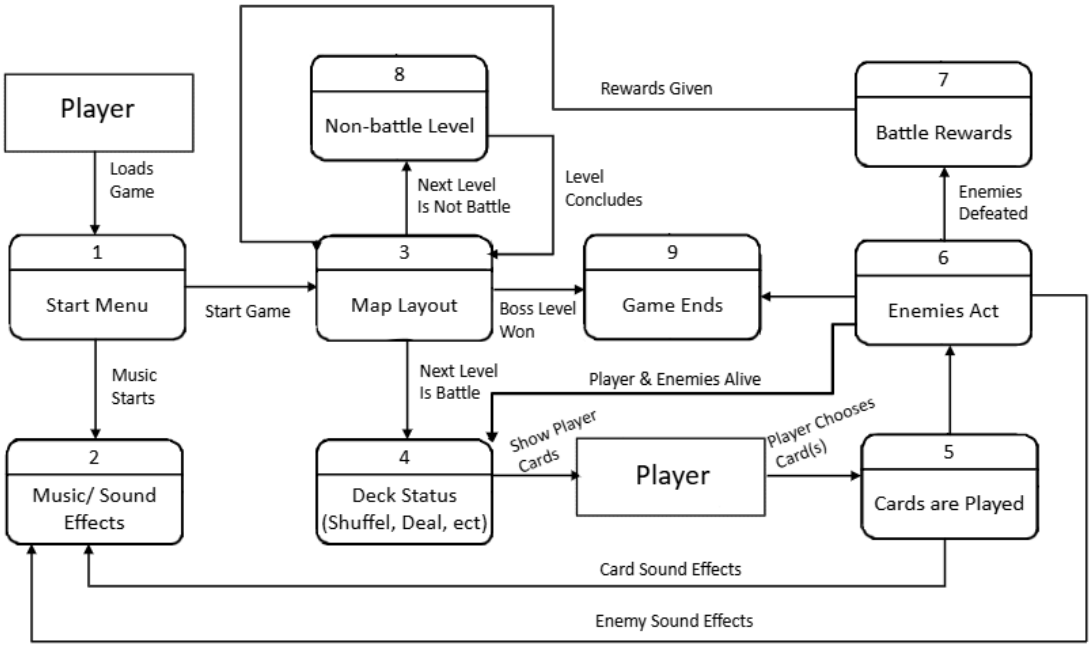
Priority: 1*

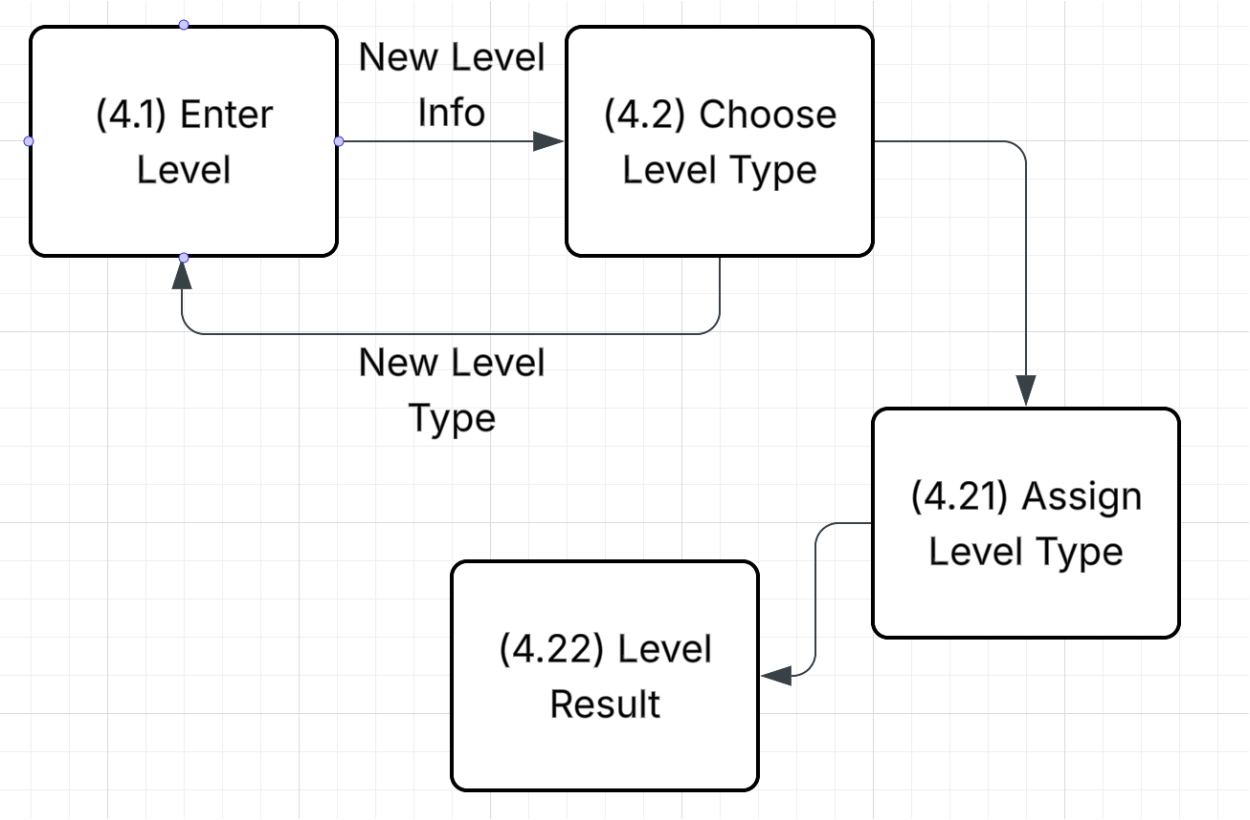
ID: DET1

* The priorities are: 1 (Must have) / 2 (Essential) / 3 (Nice to have)

3. Data Flow Diagrams from Level 0 to process description for your feature:

In the data flow diagram below I will be covering the Non-battle Level creation in its entirety.





Process Description:

Process 4.2 -

1. Generate a pseudo randomly generated number.
2. Look at the previous 2 numbers generated.
3. If the number is the same from the previous 2 generate a new number else keep number.
4. If the number from the most recently generated number is a 3 and the new number is also a 3 generate a new number.
5. If the number is 1 run a Treasure level
6. If the number is 2 run an Event level
7. If the number is 3 run a Shop level

4. Acceptance Testing:

This feature has both pre-determined elements (what goes on during a specific level), and random elements (what level and specific level event takes place). This acceptance test will primarily test the limits of the random elements.

This test will be conducted by running a non-battle event 200 times. For each non-battle event the result will be placed into an output file where it will be checked.

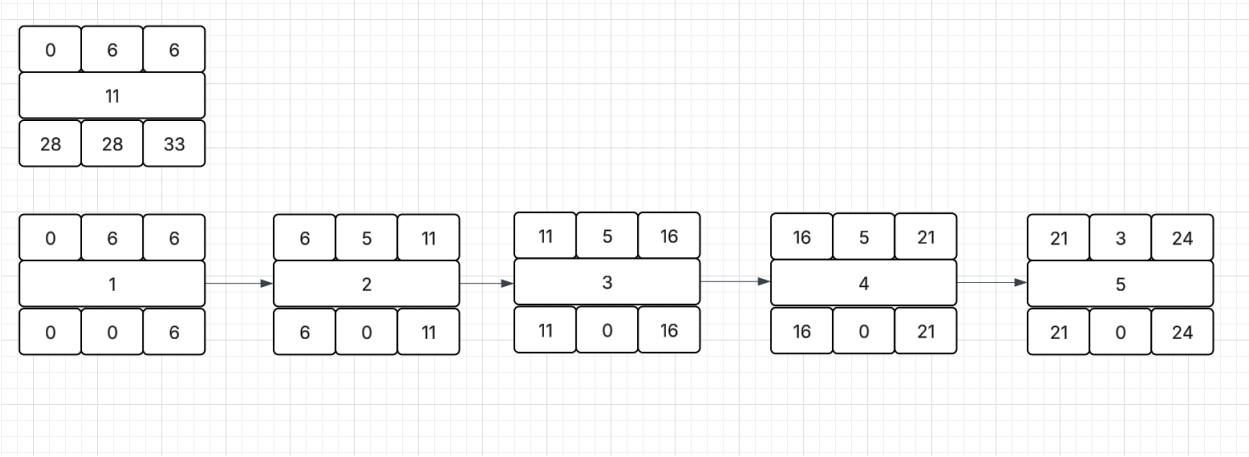
The result of this test should show that no level runs more than 3 times back to back if it is a treasure or event level or will show that a level will not run more than 2 times back to back if it is a shop level.

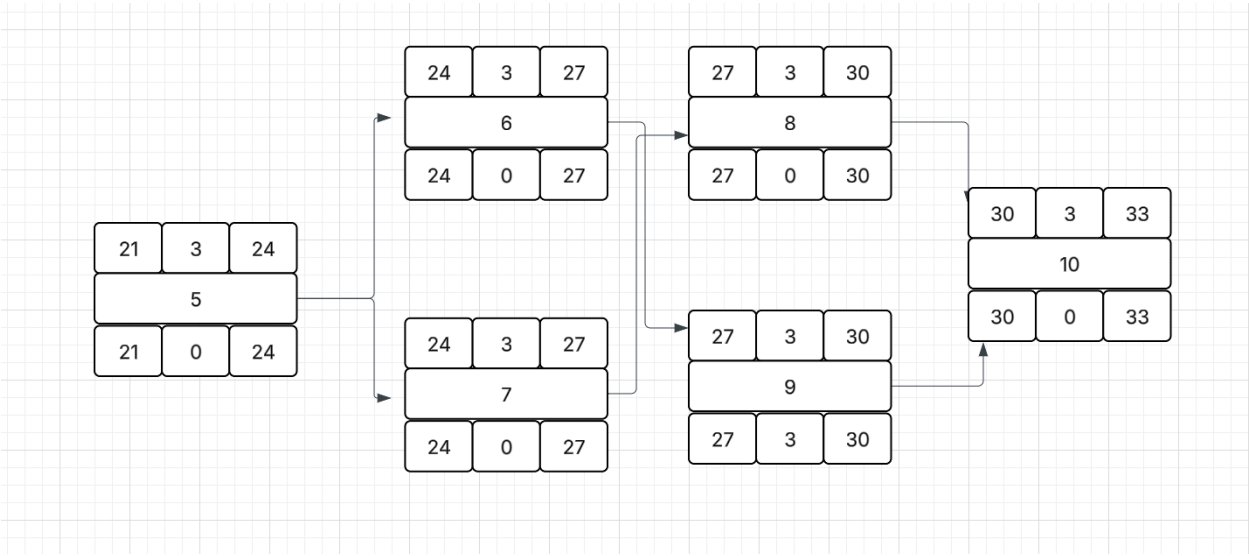
5. Timeline:

Work Items

Task	Durration (Hours)	Predecessor Tasks
1. Level Randomizer	6	-
2. Event Level Creation	5	1
3. Shop Level Creation	5	1,2
4. Treasure Level Creation	5	3
5. Treasure Randomizer	3	4
6. Shop Randomizer	3	5
7. Event Randomizer	3	5
8. Documentation	3	6,7
9. Testing	3	6,7
10. Installation	3	8
11. Artwork	5	-

Pert Diagram (2 Parts due to technology constraints)





Gantt Timeline