**Dungeons and Cards**

Dungeons and Cards is a prototype roguelike deck-builder game. In this solo adventure you will fight with cards, build your deck and explore a mysterious dungeon. It will contain: an enemy, one instance of combat, 30 cards, 3 types of consumable objects, an inventory system, a main character with movement and a dungeon.

**MVP (Minimum Viable Project)**

We’ll develop a prototype for a roguelike deck-builder such that its basic game mechanics could be tested. We’ll focus on the functionality of its mechanics, not so much on the gaming experience itself.

The MVP shall allow us to perform the following:

* Create dungeons through procedural programming in Unity
* Fight against enemies
* Move the protagonist (left, right, up, down)
* Use/consume 3 different objects
* Create an enemy

**What we’ll learn**

* Practical use of Object Oriented Programming
* Use of algorithms to create maps procedurally
* Basic knowledge of Unity
* Basic knowledge of programming for video games

**Context and game mechanics**

The project will consist of two phases: exploration phase and combat phase. The former will also consist of two phases: first, you pick the cards you’ll use during the combat itself. Then, using those cards, the combat gets started.

The game will always initialize in the exploration phase, allowing you to enter the combat phase and vice versa.

*Exploration phase*

* You can explore the dungeon and encounter traps (these will cause the player to lose HP).
* You can view your consumables and cards in your inventory. The inventory will be divided in two sections for the aforementioned types of objects.
* You’ll be able to pick consumables and cards.
* To fight an enemy, you’ll have to get near them (in a range of three tiles). This will trigger the combat phase.
* When an enemy is defeated, doubloons and/or a card will be found where they once stood.

*Combat phase*

1. Choosing cards: your currently available cards will be shown so that you choose 20 of them. You can choose 20 cards regardless of their type.
2. Combat
   1. You can use cards to harm and eventually defeat your enemy.
   2. You’ll lose HP if successfully attacked by an enemy.
   3. You can use consumables.
   4. You’ll return to the exploration phase after defeating the enemy (or restart the game if failed to do so).

**About the cards**

There’ll be 5 different types of cards available. You may have cards of various types on you at the same time. Cards will be found as loot from defeated enemies where they previously appeared.

**About the consumables**

Consumables are objects that once consumed (used) disappear. That is, they can only be used once. Four types of consumables will be available: one for increasing a card’s damage, another for increasing a card’s defense, another for healing yourself and the other for increasing the coins dropped by the enemy if victorious.

**User stories**

*During the exploration phase:*

* User story 1: movement on the stage
  + As the player, I want to be able to move orthogonally around the stage during the exploration phase.
  + Acceptance criteria:
    - The stage size is 840 x 840 pixels.
    - The stage resolution is 16 x 16 pixels.
    - The stage has 8 rooms of 140 x 140 pixels in size.
* User story 2: pick up objects during the exploration phase
  + As the player, I want to be able to pick objects up (consumables, doubloons and cards) from the dungeon’s floor during the exploration phase in order to use them during both phases.
  + Acceptance criteria:
    - In the stage there are objects that you can collect.
    - The player can pick objects up.
* User story 3: inventory management

As the player, I want to be able to move around and eliminate objects from my inventories in order to have enough space for other cards and consumables.

* + Acceptance criteria:
    - The player has both a cards inventory and a consumables inventory
    - The player has elements (cards or consumables) inside their inventories.
    - The game allows the player to get rid of cards and consumables.
* User story 4: transition from exploration phase to combat phase
  + As the player, I want to be able to switch from the exploration phase to the combat phase by getting within the combat range from an enemy (three tiles; each character occupies one tile) in order to fight using the cards.
  + Acceptance criteria:
    - The dungeon has one enemy.
    - The player has 20 cards in their deck.

*During the combat phase*

* User story 5: select cards before combat
  + As the player, I want to be able to choose 20 cards at the start of the combat phase (during its first stage) in order to use them during the fight.
  + Acceptance criteria:
    - The player has an inventory to choose cards from.
    - The player is able to fight enemies using cards.
* User story 6: combat
  + As the player, I want to be able to use my cards during combat against enemies in order to defeat them or assist myself with additional HP using consumables. During combat, the player can lose HP.
  + Acceptance criteria:
    - During combat:
      * The player has a deck of cards.
      * The player can heal themselves (acquire HP).
      * The player can deal damage.
      * The player can receive damage.
      * The enemy can receive damage.
      * The enemy can deal damage.
* User story 7: transition from combat phase to exploration phase
  + As the player, I want to be able to switch from the combat phase to the exploration phase after defeating an enemy in order to continue exploring the dungeon and fight other enemies.
  + Acceptance criteria:
    - The fight must have ended.
    - The player must have won the combat.

*During both phases*

* User story 8: view and hide the player’s inventory
  + As the player, I want to be able to view my available objects (both types: consumables and cards). I also want to be able to hide them from view.
  + Acceptance criteria:
    - The player has an inventory.
    - The player is able to have objects in the inventory.

**Non-functional requirements**

* The game will be programmed on C# using Unity.
* The game shall be executable on Windows.
* The game shall be executed by one user at a time.