If a function doesn’t have its own **MoSCoW**, assume it takes after its parent’s priority. IE New Game/Start/Continue doesn’t have one so assume it takes Menu Screen’s Must.

**MoSCoW Key:**

**Must** - Required Features

**Should** - Important Features

**Could** - Desired Features

**Won’t** - Completely Optional or Undesired Features

**Business Requirements**

* Acquire a new customer base.

**Functional/User Requirements**

* **Menu Screen**
  + New Game/Start/Continue
  + **Load**
    - Multiple Saves
  + **Options**
    - Video Settings
      * Window
      * **Borderless**
      * Fullscreen
    - Audio Settings
      * Main
      * Ambience
      * SFX
      * Music
    - Input Settings
      * Determine Keybinds
  + Exit
* **Player**
  + Movement
    - Walk
    - Sprint
    - Double Jump
  + Attack
    - Jump on Enemy Heads
  + 3 HP
  + Powerup Bar which Ability Use is tied to
* **PowerUps**
  + TripleJump
    - Adds an additional higher jump after the 2nd
    - Slow fall after a use
  + Dash
    - Mid air dash or ground
    - Slight DMG to enemies
    - I-frames
* **Basic Enemies**
  + Grunt
    - 1 HP
    - Patrols or Idles when it doesn’t see the player
    - Side Swipe Attack (1 DMG)
    - Chases Player
    - **Jump up to, down from, or between designated platforms**
  + Kingpin
    - 2 HP
    - Patrols or Idles when it doesn’t see the player
    - Side Swipe Attack (1 DMG)
    - Chases Player
    - Cone Vision
    - **It will go back to its guard location if Player leaves its vision**
    - **Jump up to, down from, or between designated platforms**
  + **Archer**
    - 1 HP
    - Patrols or Idles when it doesn’t see the player
    - Long Range Attack (accurate and long ranged)
    - **Triple Shot Attack (inaccurate, short-ranged spread)**
* **Mini-Boss/Bosses**
  + Ser Buffpin
    - 3 HP
    - Attack Logic
      * If Player is in close, basic melee with large hitbox
      * If Player is medium range, dash attack to one side
      * If Player is far away, quaffs jump potion from belt and jumps towards player
    - Player Interaction
      * Player must jump on his head to deal permanent DMG to HP
      * Player must attack boss with dash or environmental items to acquire his jump potion so they can jump on his head
  + Dad
    - 5 HP
    - Attack Logic
      * Dad throws potions with various effects
      * Dad blows horn and summons Basic Enemies
      * Big overhead swing with axe
  + **Pegasus Knight**
* **GUI**
  + Player Health
  + Powerup Bar
* **Animations**
  + Player Animations
    - Movement
    - Powerups
  + Enemy Animations
    - Movement
    - Attacks
    - Telegraph Attacks
    - **Exclamation Mark when Noticing Player**
    - **Health/DMG Indication for enemies with HP > 1**
    - **Vision Indication for enemies with non-radius visio**
* **Tutorial/Hub**
  + Quick level showing how to move, active abilities, attack, and explore.
  + Once finished it becomes a Hub World where you can enter Kingdoms and replay levels within a Kingdom.
    - Might only have 1 Kingdom right now (Time)
* **Kingdoms** (1 Kingdom for right now any more would be Won’t)
  + **Collectibles**
    - Small Scales
      * Many Per level, smaller coin-like collectible
      * Enemy Drops
      * Charges Powerup Bar
    - Dragon Eggs
      * Upgrades Abilities
      * 3 Per level, they are bigger but some are harder to get
      * Get dem eggs boi (Just something to get, maybe)
        + **Extra Screen Stuff**
        + **Add more health**
  + Environment
    - Caves are easier parts of levels or kingdoms
    - Kingdom Environments are meant to be sort of average level of difficulties
    - Castles/Castle Towns Are harder areas
    - **Traps** - Traps are more knight-made things, snares, arrow firing, bear traps
    - **Hazards** - Bottomless pits, Breaking Blocks, Sharp spikes
    - **Dragon Nest Checkpoints**
  + Level 1 - - (Get to the end of the level)
    - Cave - fewer enemies and environmental hazards
    - Kingdom Environment - Average amount of enemies and environmental hazards
  + Level 2 - - (Get to the end & fight a mini Boss)
    - Kingdom Environment - Average
    - Castle Town - A bit Harder
    - Mini Boss Fight
  + Level 3 - - (Survive the castle & Fight Big Boss)
    - Castle Inside - Harder
    - Kingdom Boss Fight
* **Game Over/Ending**
  + If defeated during a level and out of lives, end screen (Thinking princess is in prison, but whatever we have time for)
  + Victory screen, prob something cute with dragons, then an hour of credits.

**Nonfunctional Requirements**

Honestly, pretty hard to think of any, maybe only one

* Make sure the game runs smoothly, it doesn’t have shitty frames and processing.

**Implementation Requirements**

At the moment we have nothing really that would be implementation. We do have a dev level and a pratice enemy. So maybe they count.

* Dev Level
  + Any area to pratice and test player, enemies and environment building

| Use Case Name: Basic Player Combat | ID: UK-1 | Importance: Must |
| --- | --- | --- |

| Primary Actor: (Player - Users) | Use Case Type: System |
| --- | --- |

| Stakeholders: (Nathan His Law Jr. or The III) |
| --- |
| Brief Description: What can happen when a player meets any enemy |
| Trigger: Player sees enemy Type: **External** / Temporal |
| Relationships: Single and ready to mingle  Players - level/environments(traps and hazard) and enemies |
| Normal Flow of Events:  Player moves to get into range of the enemy, dodging any environment challenges by either jumping and sprinting. Once close enough, the player will use the jump on an enemy or dash through them to deal damage to the enemy. Dodging incoming attacks from enemy. They will repeat until the enemy is defeated. |
| Subflows: |
| Alternate Flows:  The player falls down a bottomless pit and dies  Traps deals damage to player  Enemies deal enough damage to defeat Player  Player runs away from enemy |

| Use Case Name: Player Collecting Scales | ID: UK-2 | Importance: Must |
| --- | --- | --- |

| Primary Actor: Player - User | Use Case Type: System |
| --- | --- |

| Stakeholders: (I, Nathan Duane His Law, The second and third of my name) |
| --- |
| Brief Description: What happens when player pickup Scales |
| Trigger: Player runs into scales Type: **External** / Temporal |
| Relationships:  Collectables and Players  Maybe environmental stuff as well |
| Normal Flow of Events:  When Player is within a certain amount of tiles near a Scale, the scale will move towards the player and be ‘picked up’ (destroyed). A sound effect will play when picked up and the Powerup Bar will increase. |
| Subflows: |
| Alternate Flows:  Dangers in the environment it take to reach the scale and possible die  Player may skip or miss scales |

| Use Case Name: Player Starts Game | ID: UK-3 | Importance: Should |
| --- | --- | --- |

| Primary Actor: Player - User | Use Case Type: System |
| --- | --- |

| Stakeholders: (It is I! NATHAN) |
| --- |
| Brief Description:How the players interacts with the hub world |
| Trigger:Player hitting start/continue. gets dropped in the hub world Type: **External** / Temporal |
| Relationships:  Hub World meets with Player what a nice date |
| Normal Flow of Events:  Player hits start and camera pans down to tutorial as the intro Quote is fades onto the screen. Tutorial shows Player the ropes via obstacles and enemies before player drops into cave/hub. Player then must clear the 1st LVL. |
| Subflows: |
| Alternate Flows:  Player exits game |

| Use Case Name: Player vs Boss (General) | ID: UK-4 | Importance: Should |
| --- | --- | --- |

| Primary Actor: Player - User | Use Case Type: System |
| --- | --- |

| Stakeholders: (N8 Renegade) |
| --- |
| Brief Description:What happens when the player meets a boss (General at the moment) |
| Trigger: Reaching the Boss arena Type: **External** / Temporal |
| Relationships:  Players and Bosses Family Dinner is going to be interesting |
| Normal Flow of Events:  The Player reaches the area the boss is located - generally an arena at the end of a LVL. Bosses will have varying attacks and may summon basic enemies into the arena. The Player must damage the boss to escape and finish the level. |
| Subflows: |
| Alternate Flows:  Player has zero-game and loses to the boss  Restarting to last check point |

| Use Case Name: Game Over (Death) | ID: UK-5 | Importance: Must |
| --- | --- | --- |

| Primary Actor: Player - User | Use Case Type: System |
| --- | --- |

| Stakeholders: Jhet “Mayhem” Birchem |
| --- |
| Brief Description: What happens when the player sustains too much damage / runs out of lives. |
| Trigger: Player health / lives being reduced to 0 Type: **External** / Temporal |
| Relationships:   * Players and Enemies * Players and Traps * Players and Bosses * Players and Environment |
| Normal Flow of Events:   * The player encounters a threat, such as an enemy, trap, boss, or environmental obstacle. * The player engages with the threat previously encountered (enters attack range of an enemy/boss, or makes contact with a trap / environmental challenge.) * The player receives the negative outcome of their interaction, penalizing them by reducing their total health / lives to 0. * The player model performs a death animation. * The player is then able to respawn at the last valid checkpoint or level start. |
| Subflows: |
| Alternate Flows:  The player beats a level/boss and unlocks the next play area to traverse to.  The player beats the final boss and gets a victory / end credits scene. |