**Functional Requirements**

**Requirement ID:** Moving

**Requirement:** Moving the character

**Location:** Main game

**Rationale:** character moving is essential to core gameplay

**Dependancies:** Character is alive, player has an xbox remote

**Importance:** Critical

**Risks:** 1. Core movement functionality is broken

2. Player doesn’t have access to an xbox remote

**Assumptions:** Users have access to an xbox remote and have proper instructions

**Pre-conditions:** Left thumbstick pointed in direction left or right

**Post-conditions:** Moves players

**Change-log:**N/A

**Requirement ID:** Character Jumping

**Requirement:** Character jumping

**Location:** Main game

**Rationale:** Character jumping is core to gameplay

**Dependancies:** Character is alive and is on ground before jumping

**Importance:** Critical

**Risks:** 1. Player can’t jump

2. Player can jump in mid air

**Assumptions:** Users have access to an xbox remote and have proper instructions

**Pre-conditions:** Player presses A on Xbox remote

**Post-conditions:** Players sprite vertically jumps. (can move left and right in air)

**Change-log:** N/A

**Requirement ID:** Aiming in 8 directions

**Requirement:** Player aiming in 8 directions

**Location:** Main game

**Rationale:** Player aiming is essential for core gameplay

**Dependancies:** Character is alive

**Importance:** Critical

**Risks:** 1. Player’s indicator is off slightly

**Assumptions:** Users have access to an xbox remote and have proper instructions

**Pre-conditions:** Player pushes right thumbstick in a direction (snap aiming)

**Post-conditions:** Player can choose what way to shoot projectiles

**Change-log:** N/A

**Requirement ID:** Character fire

**Requirement:** Character fires projectiles

**Location:** Main game

**Rationale:** Character firing is essential to core gameplay

**Dependancies:** Character is alive and has chose a direction to aim

**Importance:** Critical

**Risks:** 1. Player’s own projectiles hurt himself

2. Player can’t fire projectile

3. Projectile goes through walls

**Assumptions:** Users have access to an xbox remote and have proper instructions

**Pre-conditions:** Player presses down right trigger

**Post-conditions:** Player fires projectile in targeted direction

**Change-log:** N/A

**Requirement ID:** Gravity

**Requirement:** Gravity works

**Location:** Main game

**Rationale:** Objects are influenced by gravity

**Dependancies:** Gravity modifier is added to each object class

**Importance:** Critical

**Risks:** 1. gravity works on tiles (shouldn’t happen)

2. gravity is too unrealistic

**Assumptions:** Player is in the main game

**Pre-conditions:** gravity MUST be on.

**Post-conditions:** Objects affected by gravity fall.

**Change-log:** N/A

**Requirement ID:** Chests

**Requirement:** Chests open and unlock power ups

**Location:** Main game

**Rationale:** Players need something to keep interested (Even though might seem like functional I feel this is essential to my gameplay I’m developing.

**Dependancies:** Character is alive and walks over chests

**Importance:** high

**Risks:** 1. Chest doesn’t open

2. Chest opens but no power up

**Assumptions:** Player is in the game and has relevant instructions

**Pre-conditions:** Player is ontop of chest

**Post-conditions:** Chest opens, power up pops out.

**Change-log:** N/A

**Requirement ID:** Player dies

**Requirement:** Player dead

**Location:** Main game

**Rationale:** Character must die on hit from arrow : part of core gameplay

**Dependancies:** Character death

**Importance:** Critical

**Risks:** 1. Character might not die to an arrow

2. Character may stay dead for more than one round

**Assumptions:** Player is in the game with more than himself

**Pre-conditions:** Player gets hit by opponents arrows

**Post-conditions:** Player dies, and stays dead for whole round, player that killed the player will receive one kill point. Player respawns next round.

**Change-log:**N/A

**Requirement ID:** Spawn points

**Requirement:** spawn points

**Location:** Main game

**Rationale:** Player spawns each round in a certain location

**Dependancies:** Spawn point is active

**Importance:** Critical

**Risks:** 1. Players may spawn off side of screen

2. Players may spawn on top of each other

**Assumptions:** Players start a new round or new game.

**Pre-conditions:** Level beginning and spawn point is down

**Post-conditions:** Each Player starts on dedicated spawn point

**Change-log:**N/A

**Requirement ID:** Character Selection

**Requirement:** Character Selection

**Location:** Pre-Game Screen (character selection)

**Rationale:** Game needs character selection for players (essential to the gameplay of my game)

**Dependancies:** Player has selected “play game” on menu screen.

**Importance:** Critical

**Risks:** 1. Player’s character that’s chosen is wrong

2. Player cannot choose character

**Assumptions:** Players start new game.

**Pre-conditions:** Player is in selection screen

**Post-conditions:** Player chooses character to go into game with.

**Change-log:**N/A

**Requirement ID:** Navigate Menu

**Requirement:** Navigate menu screens

**Location:** Main Menu

**Rationale:** Player needs to navigate menus to enter screen

**Dependancies:** Player has a controller for buttons to select menu

**Importance:** Critical

**Risks:** 1. Player gets stuck in menu screen

2. Menus go to the wrong places

**Assumptions:** Player has opened up the game

**Pre-conditions:** Player presses A or moves left stick up or down

**Post-conditions:** Player can select an option with A or move up and down menu with left stick.

**Change-log:**N/A

Non functional requirements

**Requirement ID:** Character Animations

**Requirement:** Character has smooth, realistic walking, dropping, jumping and attacking animations

**Location:** Main game

**Rationale:** Players need nice looking animation to look at when moving their characters

**Dependancies:** Character is walking, jumping or in death state

**Importance:** Medium

**Risks:** 1. Animation doesn’t look good quality

2. Animation distracts players from gameplay

**Assumptions:** Player has sprite on top of chest

**Pre-conditions:** Player is ontop of chest

**Post-conditions:** Chest opens, power up pops out.

**Change-log:** N/A

**Requirement ID:** full screen warp

**Requirement:** Entire screen warps with players

**Location:** Main game

**Rationale:** Keeps players interested in gameplay (gives diversity in gameplay)

**Dependancies:** Game is playing

**Importance:** Medium

**Risks:** 1. Characters don’t warp with the map and die off screen.

2. parts of the map don’t appear back on the right side of the screen.

**Assumptions:** Screen warp is on

**Pre-conditions:** N/A

**Post-conditions:** Whole screen does a screen warp

**Change-log:** N/A

**Requirement ID:** Animated Title and menu screen

**Requirement:** Animated Title and menu sprites

**Location:** Main Menu and Title Screen

**Rationale:** Gives player something nice to look at on opening up the game.

**Dependancies:** player turns on the game and starts up main menu.

**Importance:** low

**Risks:**

**Assumptions:** Games on

**Pre-conditions:** Player opens game

**Post-conditions:** Animated menu and title screen.

**Change-log:** N/A

**Requirement ID:** extra game mode

**Requirement:** One arrow game mode

**Location:** Main game

**Rationale:** Game will need new game modes or modifiers to keep the game interesting for the player.

**Dependancies:** Timescale Dependant

**Importance:** low

**Risks:** 1. Time runs out and I wont be able to complete feature.

**Assumptions:** Player has chosen One arrow Game mode

**Pre-conditions:** Player presses ‘A’ to select one arrow game mode

**Post-conditions:** Game mode changes to 1 arrow game mode, where each player has 1 arrow.

**Change-log:** N/A

**Requirement ID:** Ingame music

**Requirement:** Music for menus and game

**Location:** Menu, main game and title screen.

**Rationale:** Music to play while the player navigates menus and plays the game.

**Dependancies:** Timescale Dependant

**Importance:** Low-medium

**Risks:** 1. Limited time might cut this feature out of the game

**Assumptions:** Player has audio on

**Pre-conditions:** Player is in either the menu, main game or title screen.

**Post-conditions:** Music plays in the background

**Change-log:** N/A

**Requirement ID:** Animated Background

**Requirement:** Animated Background behind tilesets

**Location:** Menu, main game and title screen.

**Rationale:** Music to play while the player navigates menus and plays the game.

**Dependancies:** Timescale Dependant

**Importance:** Low-medium

**Risks:** 1. Limited time might cut this feature out of the game

**Assumptions:** Player has audio on

**Pre-conditions:** Player is in either the menu, main game or title screen.

**Post-conditions:** Music plays in the background

**Change-log:** N/A

**Requirement ID:** Explosive Arrows

**Requirement:** Explosive arrows power up

**Location:** Main game

**Rationale:** Explosive arrow powerup interests players

**Dependancies:** Character is alive to fire arrow

**Importance:** low

**Risks:** 1. Arrows blast range is too big

2. AoE damage may be difficult to implement.

**Assumptions:** Players get access to explosive arrows power up

**Pre-conditions:** Player has power up and fires arrow

**Post-conditions:** Arrow Explodes on contact in aoe radius

**Change-log:**N/A

**Requirement ID:** Angel Wings

**Requirement:** Angel wings Power up

**Location:** Main game

**Rationale:** Angel wings power up interests players

**Dependancies:** Character is alive and has power up

**Importance:** low

**Risks:** 1. Power up may be too powerful

2. May cause bugs with gravity

**Assumptions:** Players have power up

**Pre-conditions:** Players have power up and jump

**Post-conditions:** Player is less effected by gravity and can jump in the air

**Change-log:**N/A

**Requirement ID:** Generated maps

**Requirement:** Procedural Generated Maps

**Location:** Main game

**Rationale:** Procedural generated maps keep game interesting each round

**Dependances:** Timescale

**Importance:** medium

**Risks:** 1. Procedural generated maps are difficult to implement, may be a time scale issue.

**Assumptions:** Algorithm for randomisation works properly

**Pre-conditions:** Players start a new round or new game.

**Post-conditions:** New maps are generated at random each round and each new game.

**Change-log:**N/A

**Requirement ID:** character selection screen

**Requirement:** In depth animations in character selection screen

**Location:** Character selection screen

**Rationale:** Players need smooth polished animation to look nice in game

**Dependancies:**

**Importance:** medium

**Risks:**

**Assumptions:** Player is in selection screen

**Pre-conditions:** Player pressed left stick up or down to select characters

**Post-conditions:** Smooth animation that moves with players selection.

**Change-log:**N/A