Table of contents

Combat Beta

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Introduction to the Combat Beta

The combat beta is an endless side scrolling 3d medieval esc game centered around combat. In the combat beta the player will fight enemies which will drop different sometimes better equipment. The player will use this equipment to try and complete boss rooms to open new sections of the world. Upon death the player will be transported to the starting area of the game which will have portals to the end of finished boss rooms (start of new areas) and will lose none of their equipment, only that which they have used. There will be a variety of weapon types and different play styles in the beta, each being introduced in different sections of the world. The combat beta will have no overlying story, nor will it have any character development. The combat beta is being built as the foundation for future story based game.

Gameplay

Controls

The control scheme for this game is based on the use of a xbox one controller. Adapting to mouse and keyboard should be easy but I will not be discussing that in this document.

Brief overview
Left Joystick : movement
Right Joystick : aiming
D-Pad : use unknow : possibly secondary movement
Back : opens inventory menu
Start : opens start menu (see start menu at page #insert)
A : jump : menu select
B : heavy attack : menu back
X : light attack
Y : normal attack
Right Bumper : open weapon select menu
Left Bumper : open use item menu
Right Trigger : shield right : attack modifier : subject to change : this could be an attack direction change, such as swing weapon horizontal instead of the base vertical swing.
Left Trigger : shield left : alt attack modifier : subject to change : this could be an attack direction change, such as stab with the weapon instead of the base vertical swing.

I think making the controls remappable is a big feature not enough games have. This is a feature I would like to implement into the game. One problem arises when implementing this feature in this game, the xbox controller triggers are considered joysticks with the right being a y axis and the left being a x axis, due to this the joysticks will only be swappable with themselves. Along with remapping the buttons I would like to be able to invert the joysticks. This will help with the use of non-xbox game pads as well. I feel like this gives the player the option to play how they want and that players who are not comfortable with the control scheme will not stray away from the game for that reason alone.

Potion making

Potions will be the main upgrade in the game. Being able to create even better potions gives the player a better reason to grind. For the potions making you will be able to add 3-5 ingredients but there will be a special boss drop that will allow you to add 2 more ingredients (including more of the boss drop ingredients). Normal mobs will drop ingredients in varying strengths. Upon opening the potion making menu (or shop) the player will see a list of all usable ingredients in their inventory. The first ingredient the player adds will determine the type of potion. So if the first ingredient body health then the player will only be able to add ingredients that boost health from that point on. We can limit the types of potions that can be made by the types of base ingredients we make, so if we want a potion that body both attack and health we would make an ingredient of the same type, and the player would use that first and build on top of that. Another option for potion crafting would to allow the player to build any type of potion they want but potions do not stack.

Using items

The player cannot open the inventory while in combat. This will affect the use of items due to the fact you can only set 4-8 useable items at a time. The intention behind this is to make fights more difficult. Before boss fights players should pot up, and then re-equip more potions as to help through the boss boss fight. To use an item the player will first have to equip it in the inventory menu under the useable items sub menu. The. Hold right bumper and move the right joystick in the direction of the item they wish to use. Upon releasing the right bumper the item will be used, causing an animation to play. This animation should take longer with potions that boost more stats. Weather or not this animation can be interrupted causing the player to use the item again or the player will just take damage is undecided.

Changing weapons

To use a weapon a player will first need to equip it in the items menu from the gear sub menu. After equipping the weapon a player can change weapons by holding the left bumper and tilting the right thumb stick in the direction of the desired weapon and releasing the left bumper. This will be followed by a unskippable animation. If attacked during the weapon changing animation, the player will take damage.

Obtaining gear.

The main method of acquiring gear (weapons, potions, and crafting ingredients) will be through combat with either base mobs or boss mobs. Different mobs will have different drop chances and may not have a drop chance for all items. Some items will be boss only items. Some items may be unlocked after completing a certain section of the game, but will drop from mobs in earlier sections. In addition to this system there will be a shop at the starting area that sells low level supplies and will buy unwanted items at varying prices.

Inventory

The player will have a limited, shared, inventory (Maybe expandable through items). The player will be able to sell her/his items at the starting area at the shop. The inventory menu can be opened outside of combat by pressing the back button. The inventory menu will have 3 sub menus labeled, gear, items, and potion making. The gear sub menu will hold all the equitable items such as the different weapons the player has. The items sub menu will hold all of the ingredients, useable, and non-useable items in the game. The inventory will be shared between these two menus, so if the player carries less weapons, she/he can carry more items. The potion making menu is used to craft potions.(This may be replaced with a shop like menu in the starting area.) This is covers in more detail in the "potion crafting section on page #insert.

Starting area

The starting area will be visited many times in the game as it is also a 'warp zone'. In the starring area there will be a shop that sells basic supplies, and possibly a shop that allows you to make potions (This may just be integrated into the items menu). The starting area will also be a warp zone to unlocked areas of the game world. When the player defeats a boss the next area of the world will open and the player will unlock the warp portal at the starting area. The starting area is a safe zone, the player will never be injured there, as you have to die to return to the starting area.

Death

Death isn't a big deal in this game. Upon dying the player is transported back to the starting area. The only negative effects are the loss of any buff from potions the player had used previous to death. Death is the only way back into the starting area. As such I expect it to be used as a tool for transporting around world. One way to discourage death is a death counter. The death counter could be a competitive tool, for players trying to do no death runs or low death runs and could lead to achievements or their could be a global leaderboard.

Weapon Types

There will be 6 weapon types, light melee, heavy melee, shield, shield and sword, ranged, and magic. Each type will have variants and you can hold one of each at the same time. And have 1 equipped at a time. Changing equipment mid fight should be a very dangerous action, as there should be a long unskippable animation when changing weapon types. Weapon types will be balanced, for instance if you had one non-aggressive enemy it should take the same time to kill said enemy with any weapon type of the same tier. Heavy weapons will do huge damage but will be slow. To try and convince players to use more than one weapon type the whole playthrough, different enemy types will be easier to defeat with a specific weapon type, the enemy will not have a hard coded weakness to theses weapon types, but instead will have AI tailored to fighting against specific weapon types.

- Light Melee

This will be the starting weapon, plain sword. Light melee will be characterized by fast movement and quick attacks. The attacks will do low damage, but will make up for it in the speed at which they do dammage. The types of weapons that could be used for this style are, short sword, sabre, and mace.

- Heavy Melee

This weapon type will be defined by being slow, but dealing large amounts of damage.

The types of weapons that could be used for this style are, claymore, battle axe, club, war hammer, halberd, and spear.

- Shield

Shields are defence only weapons, and can block 100% of damage. The animation for swapping to a shield should be extremely fast. Moving with a shield out should be very slow. This will be a situational weapon, used against specialty enemies, and in boss fights. There can be many types of shields such as, buckler, heater, kite, and renntartsche. Different shields could block different amounts of damage encouraging the player to grind to find better shields.

- Shield and Sword

Shield and sword will be characterized by being very slow and having minimal damage but with the bonus of being able to block small attacks by 100% and negating damage of larger attacks.

- Ranged

Ranged weapons such as short bow, long bows, crossbows, slingshots, thrown blades. Will be very weak and will stray of course with a randomly generated curves. They will fire fast to make up for the lack of damage and will provide a sense of defense due to the fact the player can stay a safe distance from the enemies.

- Magic

There will be four elemental weapons in the game, each dropped by a different boss on a drop table. (save for the first boss that drops it, it will have 100% drop chance on the first kill) The four elements will be, air, earth, fire, and water.

Air magic will attack with lightning, the regular attack will shoot lightning in a cone, and will drain the player's mana at a constant rate. The fast attack will shoot out one bolt of lightning for a specific mana cost. The heavy attack will charge up a ball of lightning and release it when the player releases the B button.

Water magic will use ice/water, the regular attack will send a bolt of ice to freeze enemies (killing weak ones, and stopping stronger ones), the fast attack will send out a burst of water pushing enemies back (and dealing damage to weak ones), and the heavy attack will send a wave out in front of the player pushing (all but the strongest) enemies off the screen.

Earth magic will use stones and be mainly defensive. The normal attack will place a small wall blocking enemies from walking past. The fast attack will shoot out a small rock and will stun enemies. (dealing damage to weak ones) The heavy attack will surround the player in stone blocking all damage, it will cost a small amount of mana to create the shield and will drain mana every time it blocks damage.

Fire magic will fire to attack, it will be very fast firing and leave enemies with burns. The normal attack will hit an enemy and then leave a area on fire, or will hit a portion of the map and light it

on fire, the light attack will smoke bomb an area the same way. The heavy attack will rain down fire around the player, and darin mana at a constant rate.

Magic will be challenging to keep balanced, but we can control the players use of magic but limiting their mana.

The Beginning of the Game

At the start of the game the player will spawn in the starting area with nothing but a sword, there will be no dialog to tell the player what to do, there will be the two shops the player can interact with but the player will be unable to use due to a lack of resources. The player will hopefully be able to understand they need to leave town. Upon leaving the town the player may or may not realize that they cannot go back into the town, and will continue forward in the world coming across the first series of low level enemies. There will be nothing guiding the player through the game, the only form of guidance that will be in the game will be hints through the environment.
I want the player to enjoy exploring this world, trying out new things and grinding to test out different theories they may have about the game, such as different potion combinations and combat tactics.

Flow of the Game

The progress of the game is pretty simple. Explore and fight through an area with new enemies and try and find the boss room, fight through the boss room and kill the boss enemy. And this will be a rinse and repeat for the entire beta. To keep the game interesting we will introduce new mechanics, naimly different weapon types and new enemies to the game in each new area.
The game will reuse the boss models as enemies but with lower stats and less tactics than the original boss fight. This will give the player a sense that they are becoming more powerful throughout the game, but at the same time will keep the repeat boss fights challenging.
As the player progresses through the world enemies will become stronger, with more health and stronger attacks, combat should take longer and require more skill, it should also require a better use of potions.

User Interface

The user interface will have 3 different styles that the user can change by going to the start menu, then the options menu, then into the User Interface menu. The three types of interface the player can choose from are, full, simple, and none. None is self explanatory there will be no UI at all only the game world will be seen. Simple will have the basic UI features, a health, energy, and mana bar, along with the ui for the weapon and item wheels. The full UI will have all of the items in the simple plus and will have a layout of the controller with a description of all the buttons and their uses.

- The health bar, mana bar, and energy bar

These bars will be centered at the top of the screen and stacked on on top of the other. The health bar shows the amount of health the player has left but will not display a numbered percentage, instead it will have a bar that shrinks based on the player's health/mana/energy.

- The weapon wheel and item wheel

These are both covered on page (# insert) the UI for these object will be placed in the lower corners of the screen, the weapon wheel being on the left and the item wheel being on the right of the screen. The UI elements will be round and will expand and move towards the center of the screen when they are active. When active the center of The UI will change color to show the player which section is selected. The player can move the right thumbstick to change which section is selected. Upon selection of a specific section, said section change colors then expand to show the player that section has been selected. The weapon wheel will have 8 sections and the item wheel will have 4 sections.

- Descriptive Controller

The descriptive controller will on the lower left side of the screen above the item wheel UI element. The controller will be transparent, when the player holds down a button the controller will highlight the button and give a description of its use in a small text box above the controller.

Art, Aesthetic, and Tone

The art style of a game is a tough subject to pin down. The best way I can describe the intended artstyle is, Skyward Sword with more detail and darker, or Trine 2 with less detail and lighter. I want the models to be very detailed but the textures to be very simple, I want to the world to feel full but not cluttered. I expect the art to evolve throughout the development process, and it will also depend on the artist working on the project, through their style and their capabilities.

The world will be medieval, simi fantasy, with an added touch of renaissance. This will give us a large amount of resources to reference while working on the art assets for this game. The buildings will be a mix of renaissance and medieval. The weapons will be medieval, and the armour will be mainly renaissance. The starting town will have medieval buildings but the NPC's will be dressed in renaissance.

I want to the tone of the game to be dark. I don't want it to be off putting, But I want the player to know that there is something clearly wrong with this world. I want the music to be dramatic and deep. There should never be a moment when the player isn't worried that something is about to happen.

The music in this game should be dark, not calming, or uplifting, is should keep the player alert and on edge. I think music is one of the biggest additions to atmosphere in a game. A good score can add so much value to a game. I want the music to affect players in the same way as the music in the game "The Last of Us". In the last of us a change in the background music meant something was about to happen, it would cause the player, to stop in his tracks, examine the environment, and get prepared for anything that could happen next. Music can build a large amount of tension keeping the player interested in the game.

These are my general ideas for the art style of the game. I am not an artist, I am a programer, I will be very open to any ideas or suggestions from the artist working on this game. And help in any way I can, but ultimately it is in the hands of someone else, so I will keep this section short and continue working on the features I am better able to complete.w

Production Process

This section will go over the intended production process along with the software used and the intended timeframe of the project. It will go over the goals of each team and how they will interact with each other.

The Software

The game engine that will be used for this project is Unity 3D Version 5.x.x. The reason for using this software is the good documentation, the large amount of resources available for free, and also the amount of experience I have with the software, C#, and Unity's C# methods. Unity 3D makes it very easy to implement a good UI and allows for easy animations in the editor for simple animations we may need just for testing. For art assets the software used will be up to the artist, as long as the software does not conflict with the Unity 3D engine. For the programming end, the IDE will not affect the output of the code, any IDE can be used, Unity comes with Microsoft Visual Studio, which opens automatically when you click on a script in the Unity editor.

Goals

This generalized list of project goals in the order they should be completed throughout the development cycle.

- User Interface

The base UI such as the item wheel, weapon wheel, and health/energy/mana bars. At this stage in the game we do not need all of the elements in the full UI system (See User interface on page #insert) we will only need the elements from the simple UI system to help with testing following features.

- Melee Combat

This is one of the biggest challenges in the production of this game. This should be made right after the UI as the UI will help in productions so that we don't need to stare at the console and try and find changes in values. For this we will need to model a character and give it simple animations, along with this we will need to be able to swap weapons, and assign weapon attributes, such as damage and weapon types.

- Enemy AI

This is something that will be worked on throughout the whole project as more and more enemy types are added in different areas of the world. For this we need melee combat to work and models and animations for the enemies.

- Starting Area

After we get the basics of combat Set up we will need to start work on the game world. The best place to begin is at the start of the world. The starting area is where you will be sent when you die, and also the location of the portals and shops. We will need the shops working to be able to complete potion making.

- Potion Making

For potion making we will need the shops to be working and we will need basic combat to be working so that we can test the effects of combat. The buff and debuff UI will be made along side potion making as well as the UI for inventory, and the item class.

- Item use and Inventory System

The inventory system will have to be made in conjunction with the potion making system. Using items will be simple to integrate with the basic UI system we should have already made by this point.

- Magic Combat

I have put magic combat this far down the list because it is not essential for this game. This is something that should be worked on at the same time as the bosses as magic will just add a different dimension to boss fights.

- Boss Rooms

The mechanics of the boss rooms should be relatively easy to program. The door locking behind you, the portal to the exit once the boss has been defeated and possibly a mini boss fight in every boss room.

- Boss AI

Boss AI is another extremely important factor in this game. All of the grinding is done to be able to defeat the bosses and progress to the next area. Work on boss designs should be started as soon as there is working combat. Actual AI design should begin after potion making and the inventory system are working. Boss AI should be worked on in conjunction with magic combat.

- Main / Start / Options Menus

These menus are mainly aesthetic and are not needed for any of the work on the actual game. Seeing as these are almost purely polishing features, they should be done as the project is coming to a close.

- Sound design

Sound design is very reliant on the environment and the pace of the game so it should be worked on towards the end of the project, seeing as we will most likely need another hand in this portion of production, putting it off till the end of the project gives us more time to find good help.

- World map / Environment

This isn't the very last thing that needs to be done, this should be worked on throughout the entire project. The environment of this game will have the greatest effect on the pace of the game and the mood of the game. While layout isn't extremely important it can have a big impact. I expect this to be the section worked on the most throughout the production cycle.

Teams

There will be two teams on this project, the programing team and the art team. The programing team will be responsible for all of the in engine programing, the website programing, and any technical help that the art team requires. The programing team will also be responsible for the audio of the game. The reason for this is that audio queuing is very much integrated into programing triggers for this reason the programing team may pick up another member towards the end of the project.. The art team will be responsible for creating 2D and 3D assets as well as 3D animations. The teams will interact with each other in the creation of the game world using the assets from the art team. For example a programer might use some of the 3D models to build a certain area or room to be used in the game world. The two teams will have to interact quite closely with the UI elements aswell with any of the animations in the game.

Timeframe

The time frame for this game's productions is eight months. The plan is to start after winter break and finish by the start of the fall semester the following year. I would like to have Melee combat working in the first month with a few base animations. This will include the UI for any weapon use and health and basic enemy types. After the I would like to fully develop the potion making system. This will include the crafting interface, the use of potions, the use of items, and the timer systems for buffs and debuffs. Following potion making, either boss fights or magic weapons should be implemented. It would make more sense to develop a few bosses first, switch to magic, and then design bosses that you need magic to defeat, as these would be later in the game and would come later in the production cycle. For the production of magic, the production is pretty simple, and may change based on how we want each type of magic to work. Adding magic weapons at this stage would not require work on anything outside of the weapon and character animations. Boss fight are a big staple of this game and will be a large portion of the production. Boss fights should be kept in mind through the whole production cycle. The boss rooms should be relatively simple to program, this will only have to be done once and copy pasted for the reaming boss rooms, but it will take time to build the art assets and program the boss mechanics, due to the fact that we will have to program 8-16 different bosses as well as design 8-16 different boss rooms. Assets can be reused for boss rooms which will help speed up the production, but in the grand scheme of things this will be a small game and we do not want anything (other than grinding mobs) to feel repetitive. After we have a strong base, or while we are waiting for art assets, the main focus should be the menus and the game options, most of which can be done by the programing team while the art team works on different assets.