



Eddie's Revenge



Group Members

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Game Genre

- Action
 - Eddie's revenge is a game that demands quick-coordination. Its fast-pace and quick response times, as well as the action involved, lend to it being an obvious action-game.
- Fighting
 - Although not close-combat, Eddie's revenge has lots of combat and fighting between the player and the enemies. Furthermore, it uses special abilities common in many fighting games.
- RPG-Lite
 - Although role-playing elements are lite in this game, the presence of upgradeable stats, immersive dialog, items/potions and equipment lends Eddie's revenge to the RPG genre.
- Rogue-Lite
 - Eddie's revenge takes a significant amount of its inspiration from the rogue-lite. Procedurally generated rooms, and randomness are key elements.
- Shoot 'em up
 - Last, but most importantly, Eddie's revenge is a shoot 'em up!

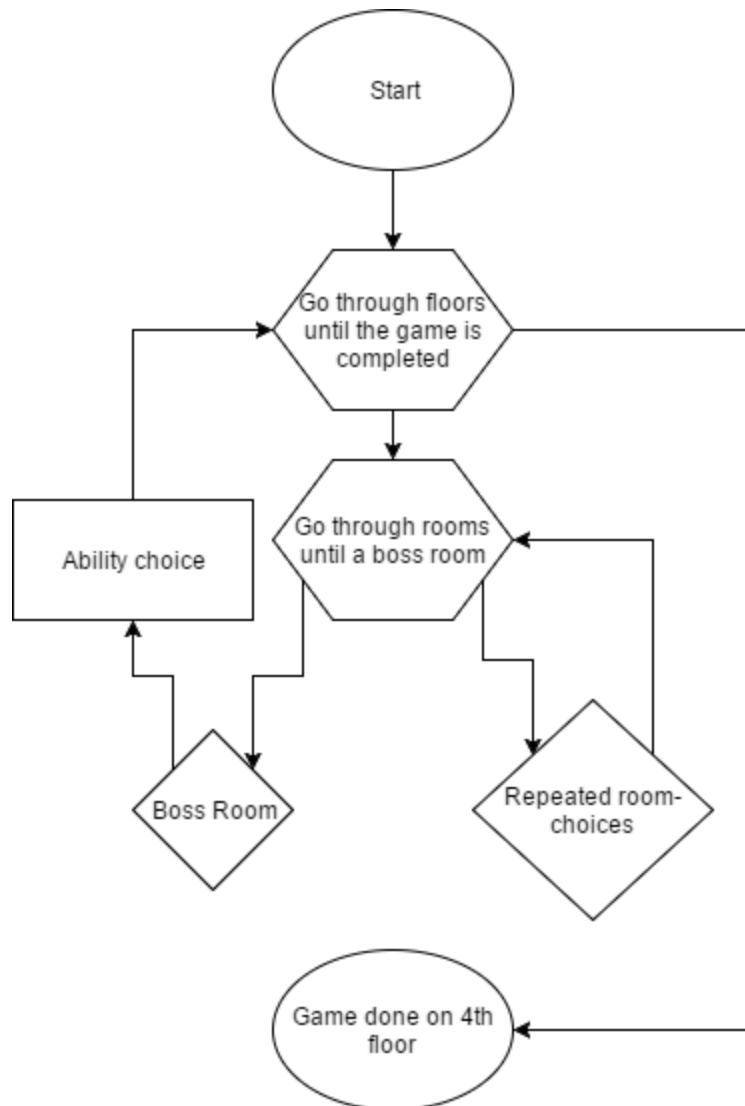
Feature Set

- Large Game World (Required Feature)
 - The game-world within Eddie's revenge is quite large, despite only taking up one office-building. In Eddie's revenge, the player can traverse the four floors of an office building. But, the true grandeur comes from the randomness of the game. In Eddie's Revenge, there are an infinite number of possibilities of gameplay experience. Each playthrough is different from the next - from the layout of the rooms to the items contained within!
 - The three secondary weapons are throwing knives like a boomerang, shotgun which shoots burst bullet shots and the explosion which is made where the mouse is clicked. For the second boss after you beat him you get Health regeneration, critical hit and reduce damage. Where health regeneration increase your health to the half. Critical hit third of a chance of increasing the damage of the bullet. reduce damage quarter a chance of reducing the damage of the bullet you take. For the third boss secondary augment.
 - During playing the game you can find random equipment's randomly generated and place in the map. The equipment's are Rage Dagger, Weapon Craft, Heart of Vitality, Quicksilver, Jewel Of Energy and Gale Reburst. Every one does
 - After killing enemies, random enemies may drop health potion or stamina potion. Where the health potion increase your health and the stamina potion increases your stamina

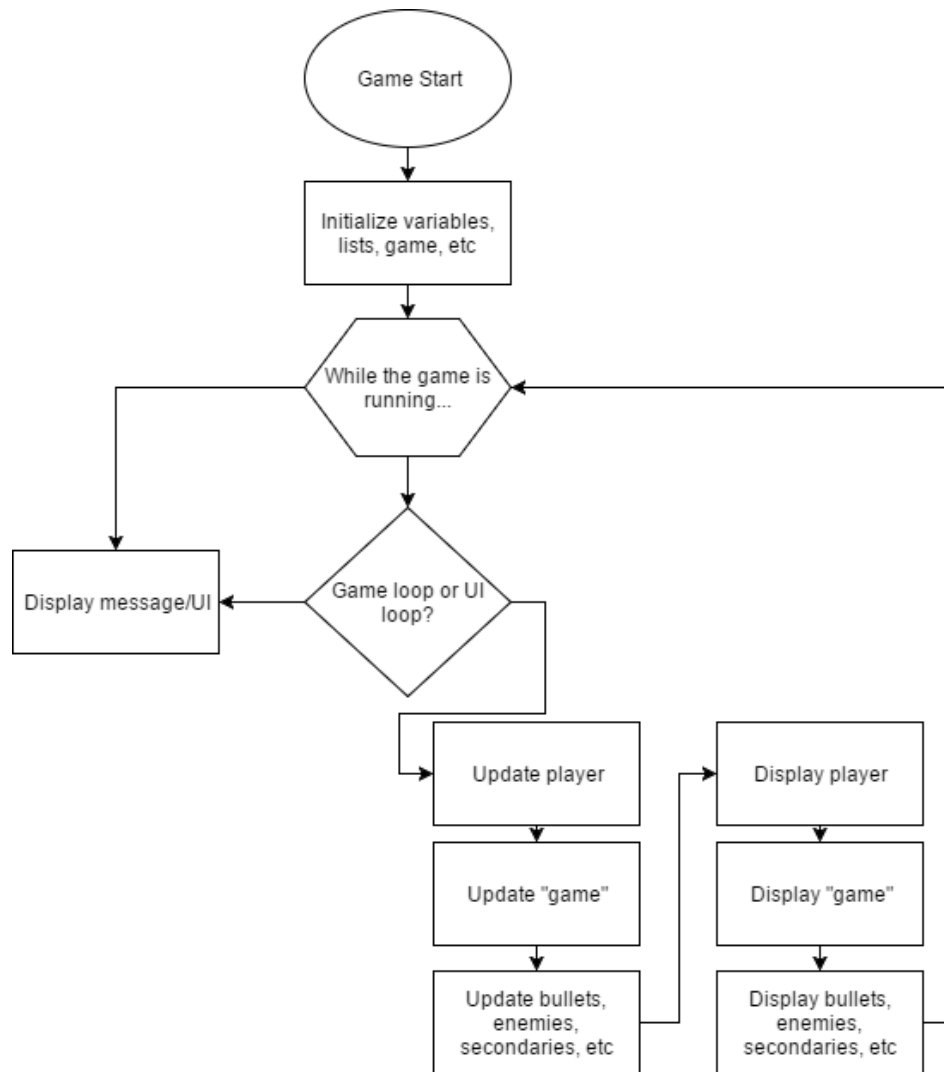
Flow Diagram

In Eddie's revenge, there are two flow diagrams which can be described. The first pertains to the process of the game in the eyes of the player, and the second pertains to the game-loop itself.

The player goes through all the rooms in the floor, searching for the boss room. Once they have found and defeated the boss, the player selects and ability. They do this for all floors, when the game ends. This is represented below:



However, the game loop looks very different than this... In the game loop, we initialize the game, and, depending on if we are running the game or the UI, we will display accordingly.



Obviously, the game loop is much more complicated than this, but for simplicity's sake, more depth is not required. For example, in the `game.update()` step, many processes occur. The game's update method keeps the floor, room, and item lists all in check, making sure that room/floor changes are being maintained and monitoring the current floor/room, etc.

Game World

General Overview

Eddie's revenge is a game about a man named Eddie. The fantasy of the game is simple: Eddie is out for revenge on the head boss of a yakuza-style laundering operation called CitiGroup (MDC). It's run out of an old office-complex on the edge of town. Eddie is prepared for anything, and goes in guns blazing. He aims to take down the head boss and his three subordinates. Will we ever find out Eddie's secret?

Setting Overview

In Eddie's revenge, we can assume that these events are occurring around the current day (perhaps in the recent past). In our punk-style setting, huge corporations are the norm; they

control everything from the police to the media. As such, it is an incredible feat for Eddie to head up against such powerful foes. Being so powerful, CitiGroup has many armed guards. They do sell military-equipment after all!

In this alternate past, body-altering substances and bio-weapons are not all uncommon: just very expensive. Healing poultices and knives that connect to your very veins are as common as an AK-47.

Thematic Elements

Eddie's revenge has game play of a lost main, unsure in his aims. One can feel this as they wander through the vast, mostly empty halls and rooms of the enormous CitiGroup-building. One never knows when they might turn the corner and find a bizarre powerful weapon.

But, the most important part of the Narrative is discovering Eddie's story. The player knows very little about Eddie, his goals, and his vendetta against CitiGroup. As the player moves from floor to floor, slaughtering those in their path, perhaps Eddie's lips will loosen, and the player will discover his dark secrets.

Despite the mystery, the player's narrative is quite obvious: "I need to enact revenge upon these who have wronged Eddie, and myself".

Character Descriptions

The main targets of Eddie's operation are three weapons-specialists. Each one reigns over a major department in the company: general weapons, rifles, and robotics. Each one will reveal themselves to the player as Eddie meets them. Each will reveal tidbits of Eddie's ties to the company. They are ruthless, profiteers, with little care for anything but themselves, and their income. With CitiGroup treating them so well, perhaps their care has rubbed off a bit on CG as well.

David is the leader of the general weapons department. He is passionate of his position and employment under the CG. He is super loyal and respectful to his co-workers and because of this trait, he will not hesitate in quickly regarding those even his closest friends as a complete enemy if they turn out to be traitors. He also strongly despises those that betray him or the CG just for questioning the morality and ethics of the CG. He finds those that question those mentioned notions to be an offense especially towards him and will attack them, because he is so passionate and dedicated to the purpose of the CG. Therefore, he dismisses and acknowledges Eddie to be a non-existent member of the CG and has no second thoughts of eliminating him.

Spencer is the leader of robotics department. Even though he does care about the success of the CG, he only seems to be only caring to work there just for his own ambitions. His ambitions include an aspiration to rise among the ranks and ultimately become number 1 in the organization regardless of what contribution he provides that bolsters the CG. He greatly values himself because he feels he should be the best despite the fact he is currently ranked 4th. Although, he does respect those that are ranked higher than him and easily accepts it, because he believes that they were rightfully ranked as he perceives them to be truly stronger than him. Therefore, to an extent he does respect Eddie partially due to his strength and the fact he was ranked #1.

Levi is the leader of the rifles department. He is not afraid to voice on what he strongly believes in and because of this, his strong opinions reflect his perception on people. Like David, he is ashamed of those that oppose the CG as he is also passionate about the fortunes that the CG is working towards. He will protect it at all costs and he will fend off anyone who poses a legitimate threat to it. Although, he does acknowledge those that have lots of potential because he feels they are a huge asset to the team.

Shane is the leader of the CG. He is the creator of all the departments and knows how to utilize all the weaponry to complete mastery. He seems to be conscious and aware that his goal for the CG to be questionable in terms of ethics, but that's only because it would thwart his own ambitions since he is in power of basically everything like the government and other related things.

Therefore, he has shunned those that have a sense of justice especially towards the CG. He does become attached to only a few of his employees if they were successful, extraordinary skilled and showed great progression and puts strong faith towards them. Although, this attachment makes him be a bit empathic towards them where he establishes a proud "student-teacher" relationship. This empathy makes him feel pity for fighting his own "students", but he still shows resolve in fighting against them for the sake of his company.

Eddie is a former member of the CG. He was ranked #1 in the company and has been known to resemble the forefront or successor of the company due to his long membership with them. During those years, he finds out dark secrets of the true purpose behind the CG. This left him very disgusted to the point he suddenly left the group, because he does not respect those that do things only to pursue their own selfish ambitions. He is generally an angry and emotionally driven person and this fuels his strength as well as his drive, because he vows to take revenge on them for manipulating society for decades since his departure. He is also aggressive and cold, but only for the good reasons and for his sense of justice. This ruthlessness causes him to kill anyone with no mercy as this causes him to not hold back against those that he despises very much. Overall, he is a genuine person at heart but with a fury like no other.

Game Mechanics

There are three main mechanics we have implemented into our game. For a reference of the various images of the mechanics of the game, please refer to the appendix, provided at the end of this document. They are listed, then described hereafter:

1. Abilities, secondaries, passives, oh my!
2. Gun and run play
3. Items and ever-stacking equipment

The player starts the game with normal pistol shooting normal bullets when he beats the first boss. He gets to choose an secondary ability from three available which they are throwing knives, knives acts the same way the boomerang acts. The other ability is shotgun where he can burst shoot using this ability. The third ability is explosion where explosion happens in the location of the mouse clicked. These abilities effect the player stamina and decreases it. The equipment's are placed randomly in the map. There is six items available. The first equipment is rage dagger it appears as a sword where it increases the damage. The second one is Jewel of Energy it appears as a Diamond where it increase the stamina bar. The third one is Quicksilver it appears as a Blue Poultice where increases speed of the player. The fourth one is Heart of Vitality it appears as Heart where it increases the health. The fifth one is weaponcraft it appears as tools image where it increase the fire rate. The sixth one is Gale Reburst where it appears as a wand and it increases the stamina regeneration. There are potions consisted of health potion and stamina potion. They are dropped randomly from the enemies after you kill them. The health potion increases your health and the stamina potion increase the stamina. The map is generated randomly with random number of exits. The exits decrease till exits reach one where this exit is the boss one. *****

Elements of Fun

An easy way to evaluate the fun of a game is to see which items in the taxonomy of fun can describe the gameplay of the game. Furthermore, the elements within the game should be congruent with one another, to create a consistent and fun game

- **Sense pleasure:**
In Eddie's revenge, there are very tight controls for movement as well as for aiming. One thing that is simple but fun to do it to run around one's own cursor. This sense pleasure is very enjoyable. Furthermore, the smoothness with which the bullets glide can be very nice. One of the main physical pleasures of our game is the audio. We have found some very catchy, thematic audio. We think it really adds another layer to our game, making it really fun to play.
- **Fantasy**
There is quite a bit of fantasy surrounding our game, however, very little is presented to the player within. This being a small-scale project, there is only so much we are able to convey with our limited know-how.
- **Narrative**
The narrative of Eddie's revenge is one of its key points. We put quite a bit of effort into the story and dialogue between the characters. We think it works very well with the game's fast-paced, difficult nature. The dialogue is gritty, and edgy, and the tones are dark and brooding. Furthermore, very little is presented to the player on the get-go. The player must unravel the story of their revenge as they play their part in the destruction of the evil CitiGroup.
This straightforward narrative is something a person could find themselves caught up in if they choose to, or ignore if they dislike.
- **Challenge**
Eddie's Revenge is a very difficult game. The inaccuracy and randomness make it very unforgiving as well. But, the game has many strategies that can dramatically increase a player's death rate. Examples are: staying far from enemies, using sprint actively, constantly moving, among others. This makes Eddie's revenge very fun to play. The players can explore and improve their skills gradually as they work towards the goal.
We believe that the challenge is a strong suit of Eddie's revenge. Play testers enjoyed playing the game, and did not seem too frustrated by their death, which is important. Often, they could see their progress, as they made it to 8 rooms instead of 5.
- **Expression**
Eddie's revenge has a slight element of expression: the choice of abilities. Although not a cosmetic decision, the choice of abilities benefits the game twofold: replayability and choice. Playtesters didn't choose one ability more than any of the others. That is, the choice of ability was fairly even. This can make players really enjoy their playthroughs. One person even bragged to another that they beat (what was playable of the game) without the health-regeneration passive. Thus, despite having abilities that are obviously better than the others, players really enjoy the choices we gave to them
- **Discovery**
Eddie's revenge, finally, has the discovery aspect. There are quite a few special items, each of which is very rare. They can discover many great items and many great combinations of abilities, passives, and secondaries. As such, the exploration aspect of our game is a great one, as with most rogue likes.
- **Tedium, fellowship**
Unfortunately, there is none...

Thus, all of these elements combined makes it so that Eddie's revenge can be a very fun, immersive game. We attempted to make it so that goal felt within reach, but not easily. This contributed well to the flow of the game, as the player will definitely feel challenged, but there is no anxiety involved.

So, we think our elements work well together. This is a small project, so obviously not every type of fun can be involved. We attempted to make it so that the things Eddie's revenge does, it does well. Lots of time making the game smooth and balanced contributes to making it a fun game!

Instruction Manual

Eddie's revenge is an intuitive rogue-like shoot-'em-up. Beat all four floors and win the game!

Controls

The controls for the game are as follows:



Key	Function
W, A, S, D	Movement
Tab	Pause/Unpause
Q	Pickup item
E	Use item
1	Enable Stamina item
2	Enable health item
Return/Enter	Skip text
Mouse	Aim Eddie
LMB	Fire primary
RMB	Fire secondary

Objective

The objective in Eddie's revenge is to exact your vengeance upon CitiGroup's head-man. To do so, the player must reach the top floor of CG's office tower.

While playing the game, you must traverse through enough rooms on a floor, collecting items and equipment on the way, until you stumble upon the Boss-room. If you can defeat the boss, you get to proceed to the next floor and your game is saved.

Once you've made it to the top floor, congratulations! You've completed your vendetta.

Items and Equipment

Equipment (randomly found within rooms) grant Eddie a permanent buff, described as follows. Items are stored and can be used once for a benefit.

Items:

Name	Picture	Effect
Health Potion	Red-Poultice	+Health
Stamina Potion	Green-Poultice	+Stamina

Equipment:

Name	Picture	Effect
Rage Dagger	Sword	+Damage
Jewel of Energy	Diamond	+Max stamina
Quicksilver	Blue Poultice	+Speed
Heart of Vitality	Heart	+Max health
Weaponcraft	Tools	+Fire rate
Gale Reburst	Wand	+Stamina regen

Playtesting Results

To aid with playtesting in early stages, we came up with several questions to add each of our participants. They were:

- Do the encounters feel too long? Too short?
- Do you feel that each ability was enticing to choose?
- Do you feel each encounter was fair?
- Do you wish each floor were longer? Shorter?
- Do you feel like each boss was interesting to fight?
- Do you feel that each boss fight lasted long enough?
- Do you feel like the game had cheap value?
- Do you like the control scheme

Unfortunately, our participant pool size was not as large as we'd hoped for; we only had 5 people test our game. But, we did get some very interesting results. For one, our controls were originally slightly different: we had it so that sprint was toggled, and that items were not displayed, just used by q and e, but players found these controls confusing. So, we changed the interface so that it reflected these changes, and we made it so that the items toggle. Some people were conflicting about how the controls of the items ought to be, so we decided to keep it as is.

One thing that we did not expect was the extent to which a game like this must be balanced. There are so many abilities, all modular, many items, equipment, etc, each of which alters the others. Furthermore, there is a thick layer of randomness spread on top that makes the game unpredictable.

Because of the above, we really needed to make sure people felt good more than the game was balanced. I doubt this game could ever be perfectly balanced, but that doesn't mean it can't feel like a really fun game to pick up and toy around with.

As for fairness, balance, and ability choice, people seemed really satisfied right off the bat. This was a problem, because it was evident that the players were slightly frustrated, but they didn't tell us. We tried to ask them roundabout questions like "how many enemies could you take at once" to gauge their introspective abilities and how fair they thought the game was. After a bit, we made progress.

We found that players liked to have the game more drawn out, surprisingly. At first, we had low health and mid damage on everything. But, players said that they wished they could play for longer. So, we increased the number of rooms until the boss room, and we increased the player's health and the enemy health by the same multiple. This generated good effects, as players lasted in rooms longer and there was less randomness to the placement of enemies as the player entered, and was surprised.

Lastly, we had some trouble with the bosses and enemies of our game. Originally, we had boss rooms that contained an enemy of a different sprite and lots of underlings but, last minute, people said they found this to be boring. So, we changed the one different enemy to be a class all of their own, and be on their lonesome. This worked for most bosses, and people liked them. However, balancing difficulty, especially for the sniper-boss became tough, as some people found it easy while others considered them to be totally impassable goals, that only caused them anxiety.

Post Mortem Analysis

Analysis follows:

- Original vision/ plan
 - Terrain
 - Gritty, good sprites
 - Many abilities
 - Equipable items
 - Tight controls
 - Fast paced
 - Melee and ranged combat
 - Gold/ points / time
- Things we failed to achieve
- Significant changes
- Wish we'd done differently

Our original idea for the game is very similar to what we have produced, with a couple of minor difference. Our original idea for the game was to have a top-down shoot em up game with many

abilities, items, equipment, etc. We wanted to have lots of terrain types and huge floors. In the end, our game is nearly identical to that which we wanted to create except for two notable changes: a lack of terrain and a lack of equipable items. Quickly into our implementation of our ideas we realized that it would be significantly more difficult than we anticipated to implement terrain and walls. Pathfinding, wall detection, enemy AI, line drawing, and more... were concepts we did not realize to be so complicated. Thus, we worked for quite some time on implementing these ideas, only to no avail. Some methods may still be within the code we have submitted. Secondly, equipment. When we started playing our demos, we realized our game played closer to

- Map
- Working with Java for first time
- Extending classes, class hierarchy, bosses
- General AI and balance
- Lots of booleans for UI
- Managing errors in huge code
- Many classes
- Bad IDE
- Collision detection, line drawing algorithm
- Optimization
 - Finding redundancies
 - Working in group moving code together
 - Divvying work
 - Keeping people on task

Appendix (Images for Mechanics and General Images)

Enemy Types:

The normal enemy which shots normal pistol bullets.



The enemy equipped with shotgun which fires burst shots



The sniper with high average shots using his laser sight



The Robot where he chases you and explode himself



The enemy with light machine gun chasing you his bullets



He throws grenades



Equipment's:

Rage Dagger



Increases the Damage

Heart of vitality



Increases health

Quicksilver



Increases the speed
Weapon Craft



Increases the fire rate

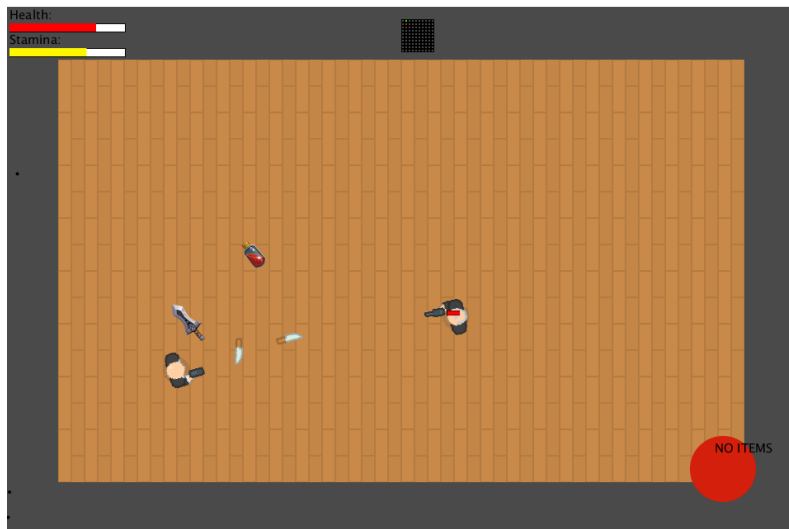
Jewel Of Energy



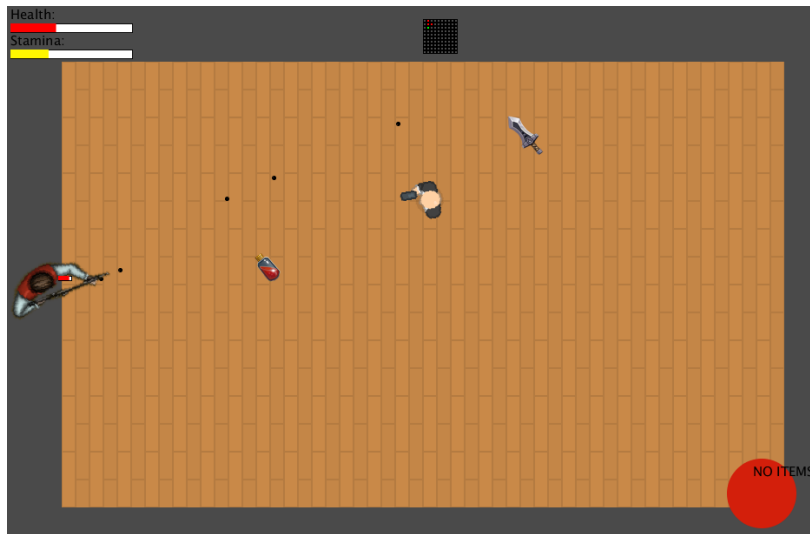
Increases the stamina
Gale Reburst



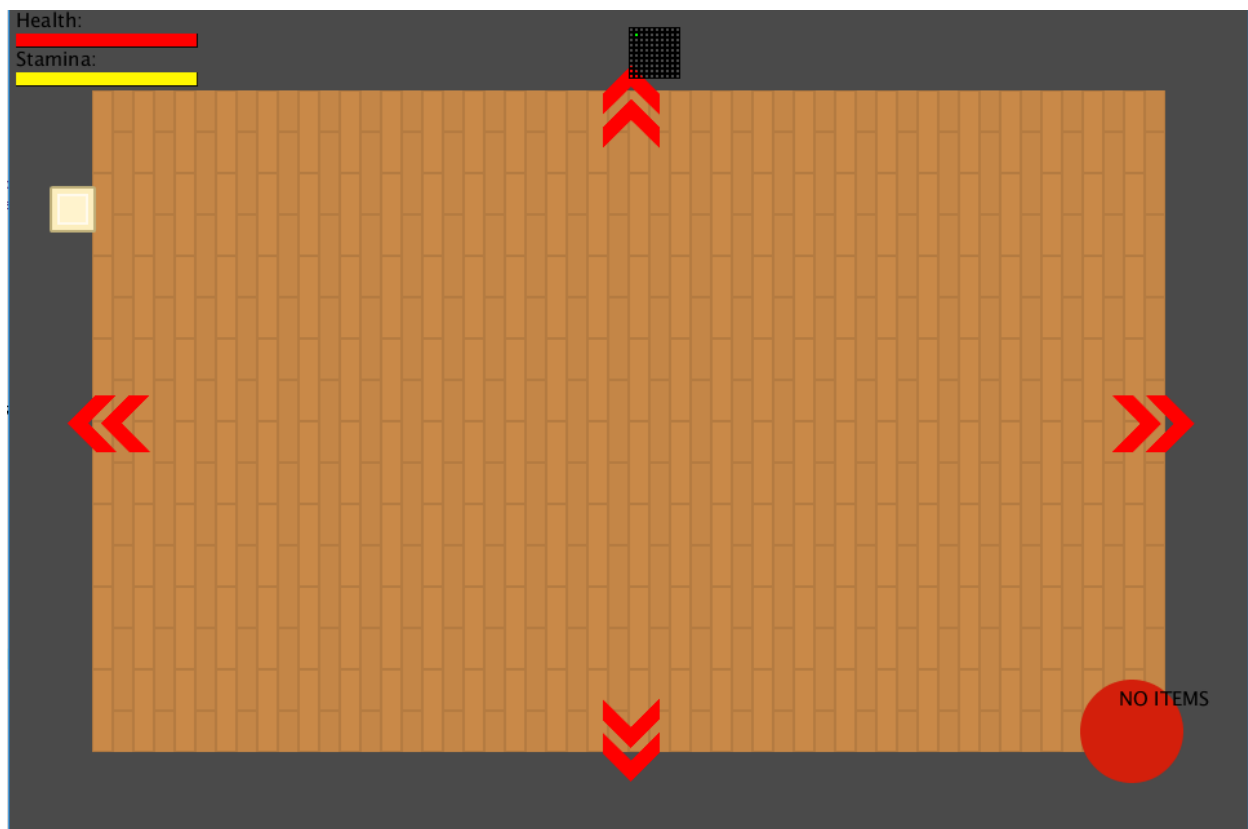
Stamina regeneration



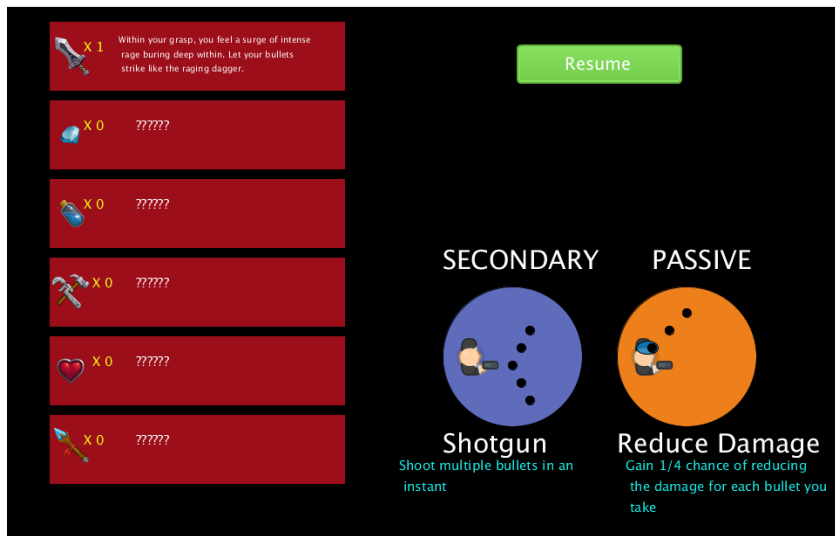
The player attacking the enemy using the throwing knives secondary Weapon which acts like a boomerang.



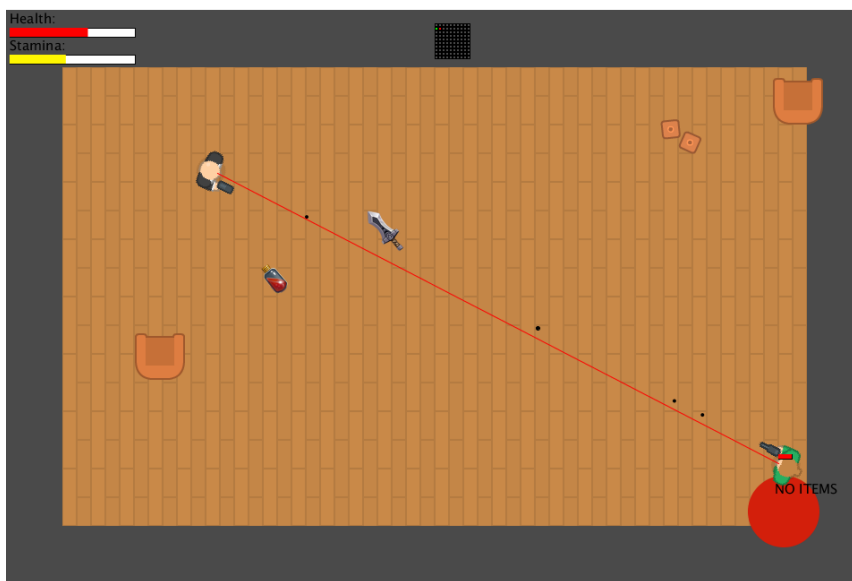
The player trying to defeat first level boss.



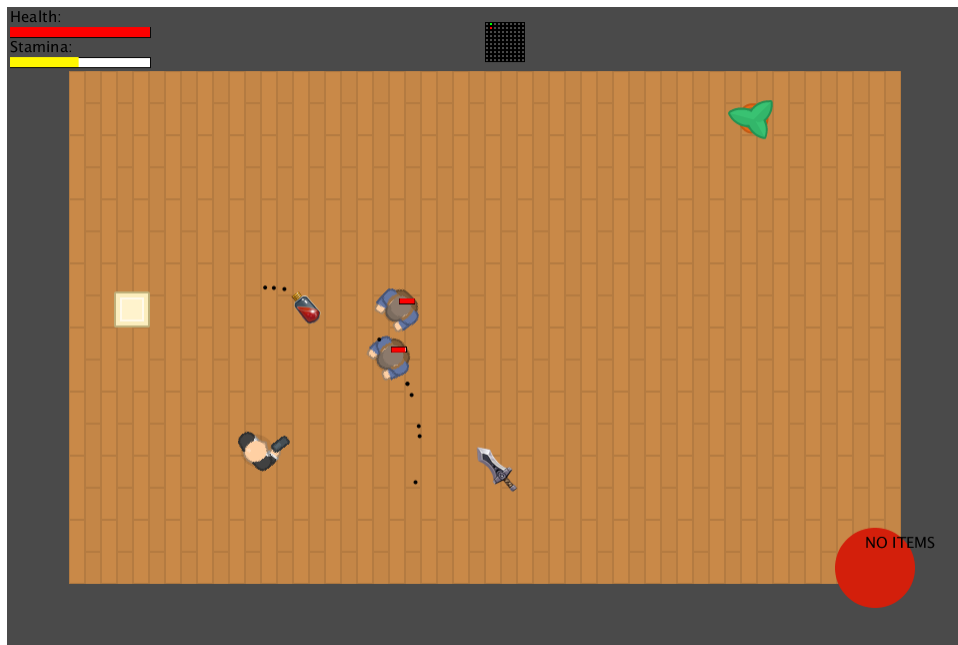
Showing the map which randomize the amount of exits in the map until only one exit will be available ,this is where you meet the boss.



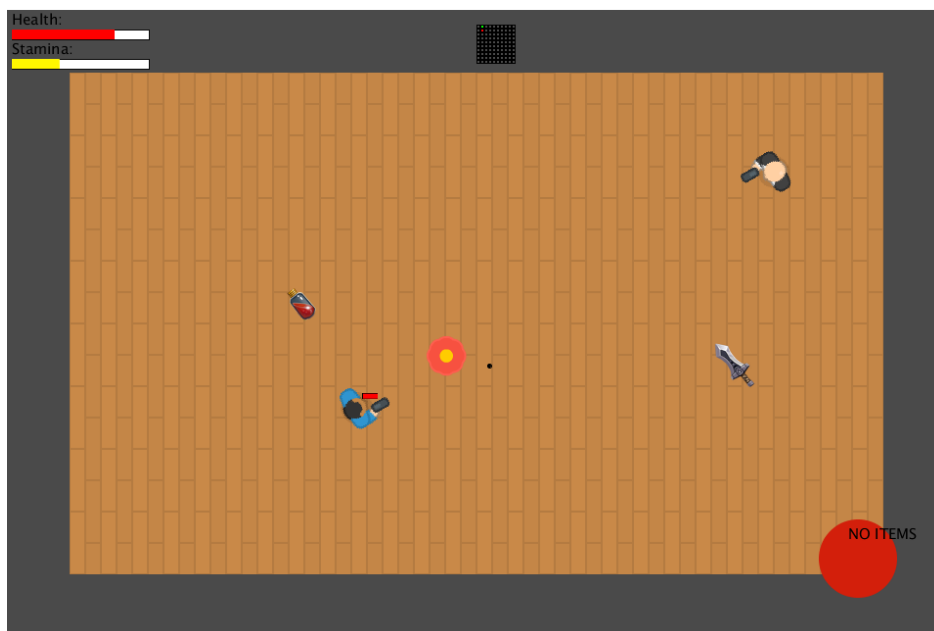
The pause menu where it shows the player the equipment's he have and the secondary weapon and the passive he chose.



The player trying to kill the sniper enemy who has already set him as the target by using his laser sight .



The player trying use his secondary ability shotgun to kill the robot who explodes when he become close to you .



The player using his secondary ability explosion where explosion happens where the mouse was clicked .