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TEMP NOTES

- Ice and wood enemies
- Ice enemies are more common, 65% (temp)
- Wood enemies are less common, 35% (temp)
- Ice enemies are one shot
- Wood enemies are 2 shot
- Wood enemies drop coal
- Coal regen mana
- Each fireball uses 5 mana (temp)
- Mana is 100 points max
- Coal Regens 25 mana points (temp)
- Health is 100 points max
- Wood enemy deals 5 damage
- Ice enemy deals 10 damage
- Endless
- Every 10 seconds = 5 score
- Ice enemies = 10 score
- Wood enemies = 15 score

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Team: Tibi, Oscar, Joshua

Week 1 Monday 16/10/23

We first discussed as a group what type of game we want, the theme, character and how to play and the software we will be using. Our first idea was to make a 2D Platformer where the player would have to go through obstacles to reach the goal while fighting enemies as a living furnace.

The main theme we were going for was Steampunk but we then changed the idea into a survival game with an industrial theme. We then tried coming up with a name and chose a temporary title: Furnace Man.

The idea was to survive a horde of enemies and the only way to defend yourself is to use the Fireball abilities that shoot out from the Furnace trap door. The enemies will be living ice cubes that approach the player slowly and wood logs that are slightly faster and drop coal. They will all progressively increase in speed as the timer goes on. The ice enemies will be a one shot kill while the wood enemies will be a two shot kill, but the game progressively gets harder as the enemies will run towards the player faster the longer the player survives. The Wood enemies will also drop a Coal item which will automatically go into the player's inventory and it will be bound to a key such as Space Bar in order for the player to use to regenerate some "Mana".

The fireballs shot by the player will be launched to either side by the press of a key, either left or right. They will be straight, fast projectiles that will not stop until they have hit an

enemy or they went off the screen. Each fireball shot will consume some “Mana” from the player’s Mana Bar. The only way to regenerate said Mana would be by consuming a Coal item using Space Bar.

In order for the player to get more Coal items, the player must defeat the Wood enemies that have a chance of spawning whenever an enemy spawns in the game. The Coal will regenerate some mana upon use.

When we finished our idea we decided to start on the project the first thing we did was create an account on Github made a group, we each then choose some tasks, weather to start the creation of a window on which the final game would be played or start sketches for our MC (main character) and its enemies

Week 1 Tuesday 17/10/23

During our time off and during sessions we create various game assets . The first asset that was made was the Furnace which was made used on a Digital Drawing application. We then added some shading and texture to the furnace and created fireballs that will shoot out from it. The second asset we created outside our sessions was an oak log but we still need to add in more features to it such as appendages for its legs and maybe eyes so the player knows it's an enemy . After finishing our design for the Oak tree then focused on creating the Ice based enemy . Rather than just creating a simple ice cube design we decided to go modify it by including it with different shades of blue, we then included visual features such as eyes to emphasise its a living enemy. The final asset we finished in our session was a coal design which is a straightforward design. We then changed our focus on coding the game and adding in animation for our oak tree enemy. However we encountered a challenge adding in the shooting mechanics for the player character, which ended with accidental continuous beams of energy rather than shooting fireball projectiles individually

Week 1 Thursday 19/10/23

During our time away from our sessions we finally fixed the shooting mechanic, made a game over screen and created another asset. The game over screen that was created will only appear once you use all of your mana. This week's session will be focusing on creating a menu feature for the game. In this feature the player will be given a select screen to start the game whenever they are ready or leave the game when they are done playing. We were planning to make an animation for the ice enemy however we realised there is not much to animate when it comes to living ice so we decided to leave that. We did finish the menu code but encountered a lot of errors.

Week 1 Friday 20/10/23

We have successfully fixed the menu error code that occurred from our previous work session, and included a timer mechanism. However doing this somehow impacted the games performance as it appeared to have a lot of lag. This may have been caused by the amount of times the If code was used. For Today's Session we were discussing if we should implement another adversary as an enemy, specifically a spider. The concept design for the spider is

bigger than your typical spider and includes its typical feature of yellow eyes. However as time went on we decided to redirect that idea and focus more on the Background. When discussing the background we were thinking whether to actually design the background ourselves or to grab an existing image of the internet. After consideration we all decided to go with an preexisting image due to that we aren't that good when it comes to visually designing custom backgrounds

Week 2 Monday 23/10/23

As we come to our second week of development, our main object in our work session is to implement character in the game. Today we will be implementing some missing components to improve the experience and making it more challenging for the players. This would include adding a restart button that allows the player to continue playing the game after they have died, also we want to include a scoring mechanic to show how well the player is doing. In our lecture classes we had to make a wiki page showcasing the game assets and the HUD, with a detailed description of what they do and how they function. Yet our coding has overcome another obstacle, while we have implemented our enemy character in the game, we are now experiencing some issues. We have successfully made it so that enemies appear on the left side of the screen however it is not appearing on the right side. Our main goal for this session is to make sure that the enemy spawns on both sides, this may be something that can be done for next week

Week 2 Tuesday 24/10/23

We have recently added in more content for our wiki page and now are trying to fix a gaming issue within the code this includes and games freezing or some of the enemies not appearing on the screen. But we still made progress, we have finally fixed the fire projectiles they now interact and make the enemies disappear upon impact and making sure the enemies also appear on the right side of screen. The last thing we think we did for this session is create a flowchart to show the operation and the mechanics for our game.

Week 2 Thursday 26/10/23

Today's session we will be focusing on creating background music for our game. Our music was originally going to be made using a website ,Bandlab which is a digital workstation, but instead used a few samples which would push us into the direction for our theme. The sort of theme that we are going for is more of a nostalgic 8 bit style combined with space themed. To make the game progressively more challenging we are hoping to set a rapid tempo for the music to make the gameplay much more intense or we might just speed up the game itself instead. Realising how close our deadline is we shift our focus on starting our presentation, we are already on an excellent for our project so now should for our

Today we are creating background music for our game, and they are using Bandlab to create our music. We are planning to use a few samples and change it up a bit. The sort of theme song

we are going for is 8-Bit with a bit of a space theme. Our goal is to make the tempo for the music fast since the game will be more challenging as you play. We have now started with our presentation since we the deadline is getting close

Week 2 Friday 27/10/23

As soon as we started our class we focused on improving the speed of the game to make it challenging but somehow managed to encounter more glitches and errors in the game. Sometimes the enemies go right by the player or sometimes it would only damage the wooden enemy or the ice enemy.

Week 3 Monday 30/10/23

In this week we are close to our deadline and making a start on our individual documents and still adding in more information for our Slide like screenshots not much to do on the gaming aspect for now we might

Week 3 Tuesday 31/10/23

We finished our presentation and continued working on our reflective document

Week 3 Thursday 02/11/23

In this week we proofread our presentation and game tested the game and then presented it in front of our teachers

REFERENCES:

Background:

<https://www.gameartguppy.com/shop/space-ship-interior-background-repeatable/>

Menu Background:

https://www.freepik.com/free-photo/background-made-from-bricks_10980125.htm#query=brick%20wall&position=1&from_view=keyword&track=ais

Music:

<https://pixabay.com/music/electronic-let-the-games-begin-21858/>

Fireball sound effect:

<https://freesound.org/people/NoahBangs/sounds/636082/>

KNOWN ISSUES:

```
92 # Check if the Play Button is clicked
93 if play_button.collidepoint((mouse_x, mouse_y)):
94     if click: # If the Play Button is clicked, run the Main Game function
```

Exception has occurred: UnboundLocalError ×
cannot access local variable 'click' where it is not associated with a value

File "\\STU01FS\\HOMES\\22329242\\GitHub\\FurnaceManProject\\Main.py", line 94, in main_menu
if click: # If the Play Button is clicked, run the Main Game function
^^^^
File "\\STU01FS\\HOMES\\22329242\\GitHub\\FurnaceManProject\\Main.py", line 231, in <module>
main_menu()
UnboundLocalError: cannot access local variable 'click' where it is not associated with a value

The click variable was misplaced.

```
115 # Function for the main menu
116 def main_menu():
117     while True:
118
119         click = False
120
121         for event in pygame.event.get():
122
123             # Quits the game
124             if event.type == pygame.QUIT:
125                 pygame.quit()
126                 sys.exit()
127             if event.type == pygame.KEYDOWN:
128                 if event.key == pygame.K_ESCAPE:
129                     pygame.quit()
130                     sys.exit()
131
132             if event.type == pygame.MOUSEBUTTONDOWN:
133                 if event.button == 1:
134                     click = True
```

I changed the location of the click variable

```
452 ice_enemies_left_list.remove(ice_enemy_left)
```

Exception has occurred: ValueError ×
list.remove(x): x not in list

File "\\STU01FS\\HOMES\\22329242\\GitHub\\FurnaceManProject\\Main.py", line 452, in game
ice_enemies_left_list.remove(ice_enemy_left)
File "\\STU01FS\\HOMES\\22329242\\GitHub\\FurnaceManProject\\Main.py", line 146, in main_menu
game()
File "\\STU01FS\\HOMES\\22329242\\GitHub\\FurnaceManProject\\Main.py", line 515, in <module>
main_menu()
ValueError: list.remove(x): x not in list

The game was running that if statement even when shooting a log enemy.

```

261     ice_spawn_left = False #Variable to check if the enemy has spawned on the left side
262     ice_spawn_right = False #Variable to check if the enemy has spawned on the right side
263     log_spawn_left = False
264     log_spawn_right = False

```

I made a variable to check if the enemies spawned on one side for each enemy.

```

479     fireballs_left.remove(fireball_left)

```

Exception has occurred: ValueError ×
list.remove(x): x not in list

File "\\STU01FS\\HOMES\\22329242\\GitHub\\FurnaceManProject\\Main.py", line 479, in game
 fireballs_left.remove(fireball_left)
File "\\STU01FS\\HOMES\\22329242\\GitHub\\FurnaceManProject\\Main.py", line 146, in main_menu
 game()
File "\\STU01FS\\HOMES\\22329242\\GitHub\\FurnaceManProject\\Main.py", line 533, in <module>
 main_menu()
ValueError: list.remove(x): x not in list

The game crashes if you spam fireballs.

```

221 def game_over_func(score, score_amount_text):
222     while True:
223
224         for event in pygame.event.get():
225
226             if event.type == pygame.QUIT:
227                 pygame.quit()
228                 sys.exit()
229             if event.type == pygame.KEYDOWN:
230                 if event.key == pygame.K_ESCAPE:
231                     main_menu()
232
233             # Game over screen
234             screen.blit(game_over_background, (0, 0)) # Blits the game over background
235             screen.blit(game_over_text, game_over_text_rect) # Blits the game over text
236             screen.blit(score_text, (430, 370))
237             if score >= 100:
238                 screen.blit(score_amount_text, (460, 420))
239             else:
240                 screen.blit(score_amount_text, (470, 420))
241                 pygame.mixer.music.stop()
242
243             pygame.display.update

```

Game freezes when health reaches 0

```

243     pygame.display.update()

```

Forgot to add the () at the end of line 243.