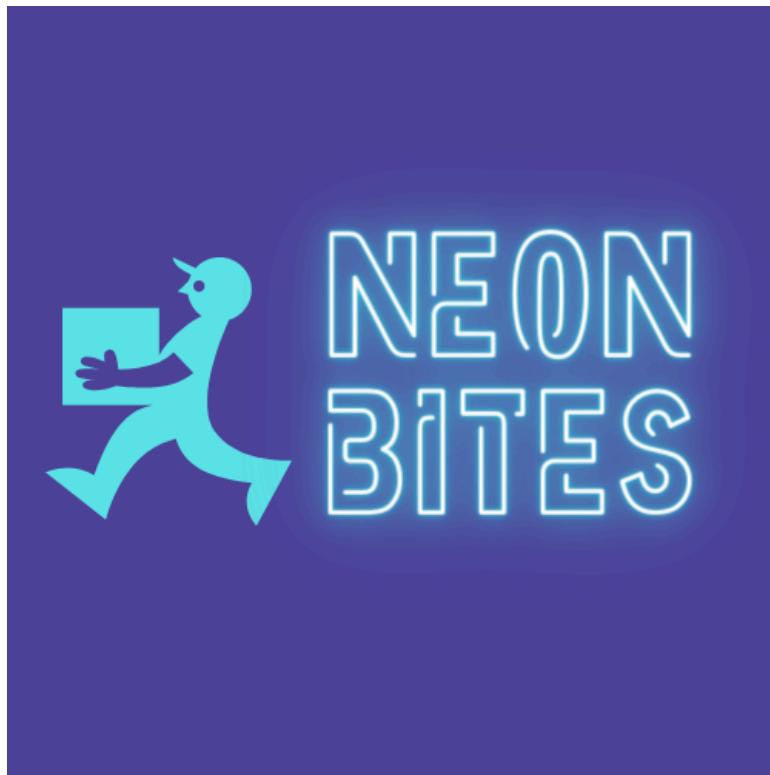


CS 426 Asgn. 9 - NeonBites Design Document



Game Title: **NeonBites**

Team:

1. Bianca Jankiewicz
2. Alexa Osuna
3. Pranav Mishra (Project Manager)

Tools:

- Version Control: Github https://github.com/bjank2/cs426_NeonBites
- Bug Tracking: Github https://github.com/bjank2/cs426_NeonBites
- Communications: Discord

Executable for PC : [Download here](#)

Gameplay:

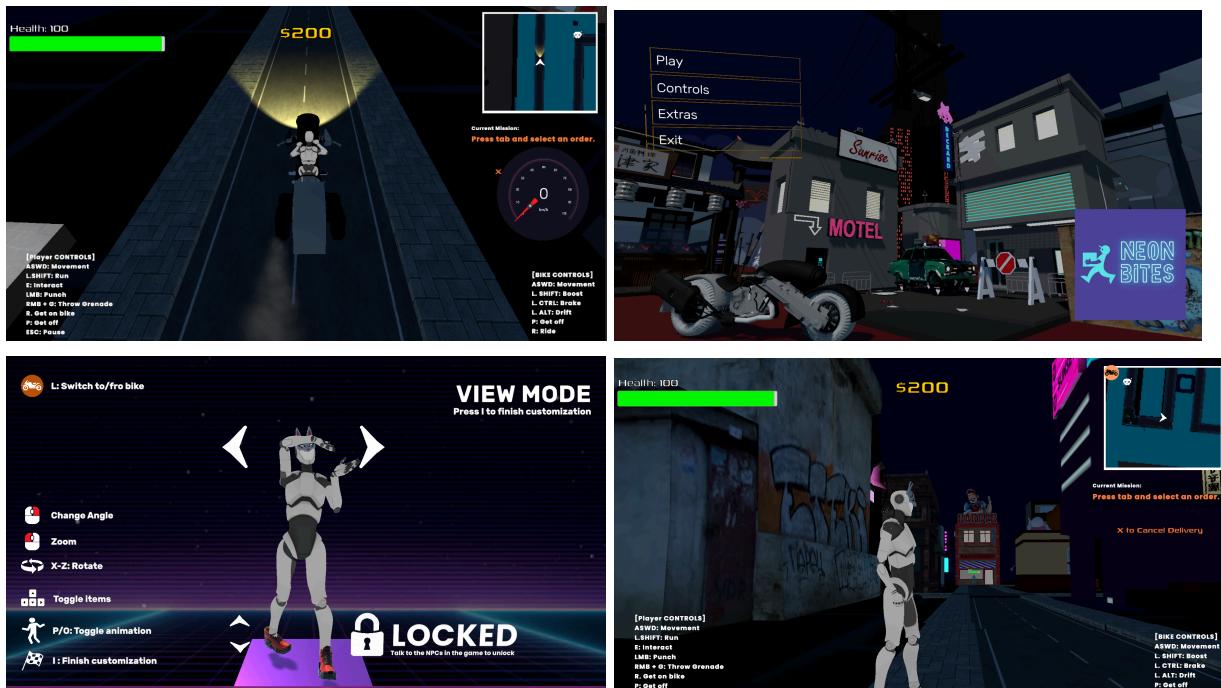
NeonBites is a thrilling cyberpunk food delivery game where players take on the role of a delivery boy / robot navigating the neon-lit streets of a futuristic city. Players must run, jump, and ride their bikes through the bustling cityscape, picking up food orders and delivering them across various locations. With ramps, shortcuts, and a

dynamic driving mechanic, players must use their skills to navigate the urban terrain efficiently.

Features:

- Run, jump, and ride your bike through a neon cyberpunk city.
- Pick up food deliveries and transport them to their destinations.
- Utilize ramps, shortcuts, and dynamic driving mechanics to navigate the city.
- Use minimaps and routing systems to find the quickest routes to deliver food.
- Manage time, damage, and fuel with the ability to refill at certain stations.
- Encounter traps and enemies such as roadblocks, thug areas, and crime hotspots.
- Avoid traps and enemies to prevent fighting for your package.
- Single-level gameplay is focused on timely delivery and earning rewards.
- Talk with NPCs to earn brownie points and learn the secrets of the cybercity this game is based in.

Screenshots:



Avoiding Traps:

In order to get to their delivery locations, the player must get past a variety of obstacles and traps as they move across the city. These traps might be competitor delivery service roadblocks, criminal-infested alleyways, or crime hotspots where the player might run against hostile NPCs. The player may lose their delivery or have to fight to protect themselves and their package if they don't escape these traps.

Level Specifics:

The city itself is the main level, setting the scene for the player's delivery adventures with its neon-lit streets, tall towers, and expansive urban landscape. For the player to

move quickly across the city and arrive at their goals on time, they must make use of ramps, shortcuts, and dynamic driving mechanics.

Time System:

An essential feature of the game is the time system, which requires the player to fulfill orders in a set amount of time in order to please clients and receive rewards. Managing time becomes crucial when the player must juggle several deliveries and navigate through the crowded streets of the city.

Rewards & Point System:

Players can upgrade their character, vehicle, and equipment by using the currency they earn from successfully making deliveries within the given time range. A player's ranking in the delivery app is enhanced by maintaining a high delivery success rate and customer happiness level, which opens up new options and incentives.

Overall Goal:

By earning money through precise and prompt deliveries, the player's ultimate objective is to effectively update and repair their robotic character. The user advances through the game, unlocking new challenges and rising to the position of top delivery robot in the cyberpunk city of NEON-Bites by overcoming time limits, dodging traps, and pleasing customers.

Demo

FEs:

- Interaction Pattern: Player vs. Game. There is no multiplayer, the player interacts with NPCs only.
- Objective: Successfully and accurately deliver food to customers (rescue, get the food to the customer safely)
- Resources: Currency, character/vehicle upgrades, health, delivery app ranking
- Conflicts: time, unhappy customers, malfunctioning self.
- Boundaries: Physical boundaries: Player is confined to city.
- Outcome: Successfully upgrade and repair yourself with money or exchange parts by completing orders accurately and timely.

Rules:

1. Rules for Defining Objects and Concepts:
 - Player character: The robotic food delivery driver is the main character, with attributes such as health
 - Orders: Different types of food orders represent the main objective of this game. Each order has attributes such as location, food type, and time limit.
2. Rules Restricting Actions:

- Time Limit: Restrict the amount of time players have to complete each delivery
 - Resource Management: Money and fuel are limited, and you have to strategize how to effectively spend your money. Upgrades can be bought with money, and specific objectives can be completed for customers to exchange parts instead of money.
 - Combat: Characters can only attack when the customer turns hostile, or when the delivery package is threatened.
3. Rules Restricting Effects:
- Damage and Health: Health is tied to the functionality of the robot, and this can be decreased by attack or lack of maintenance.
 - Customer Satisfaction: Restrict the effects of delivering orders successfully or failing to meet customer expectations, affecting tips, ratings, and future orders.

Level Design

1) Paper drawn sketch:

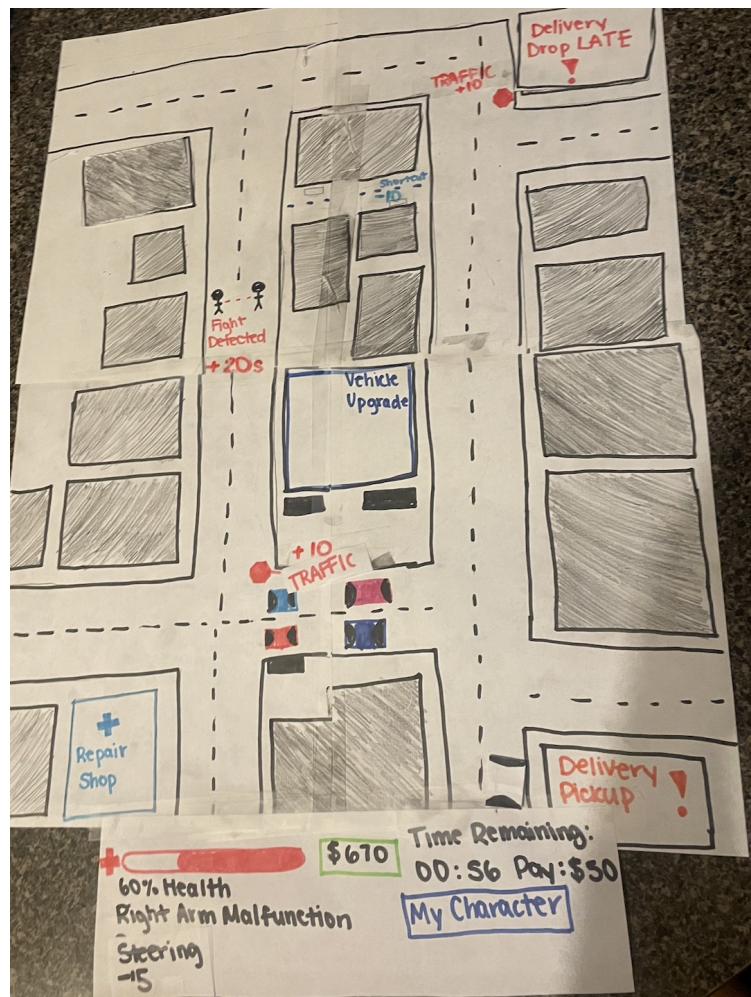


Figure 1: Rough sketch of city from a top view with UI elements as well

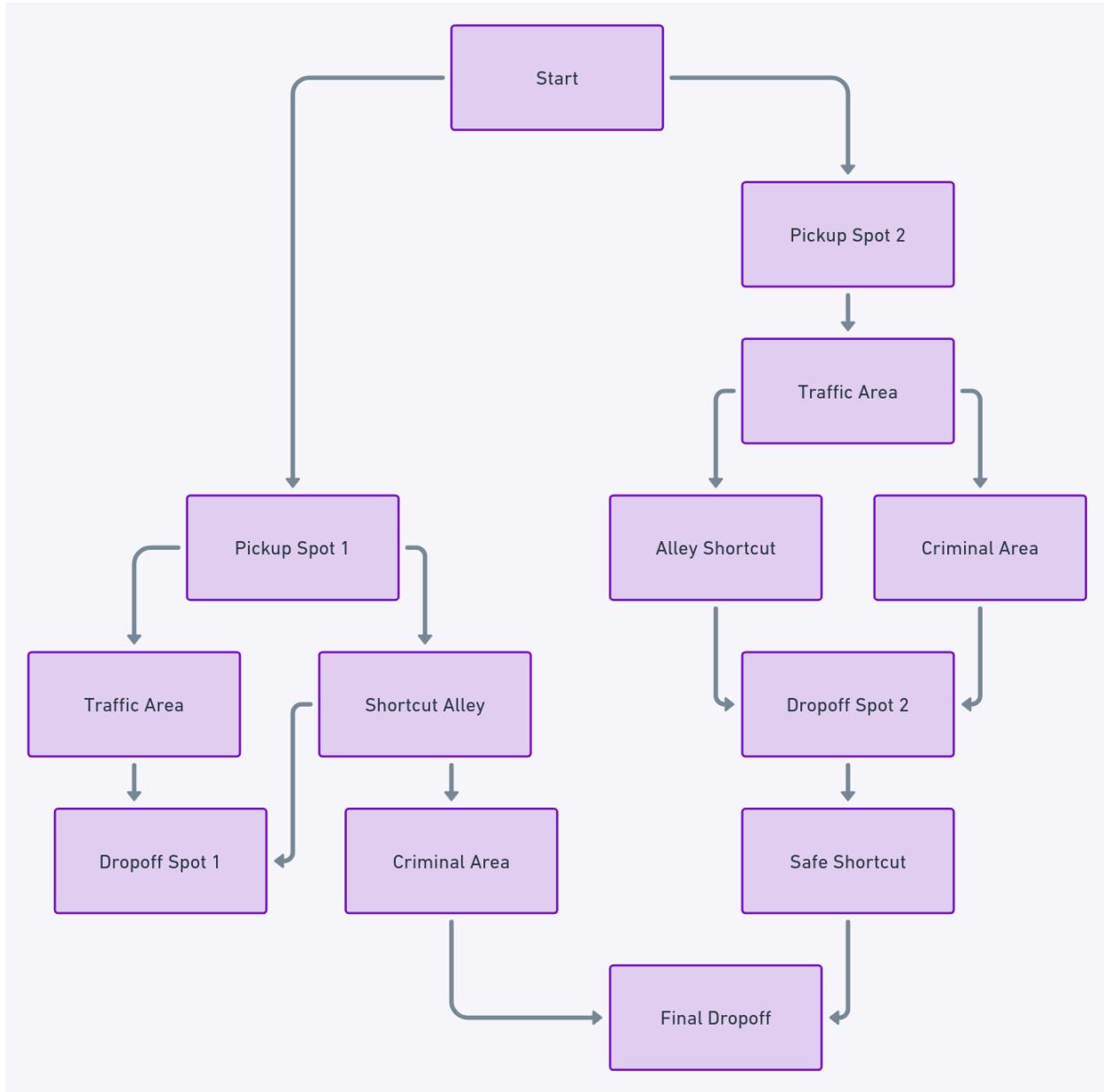


Figure 2: Flowchart of how a delivery might go by

2) Level Design Principles

Floor Plans:

- Design diverse terrain features that reflect the neon cyberpunk aesthetic.
- Include narrow alleys, expansive streets, towering skyscrapers, and hidden shortcuts.
- Create dynamic environments that encourage exploration and strategic navigation.
- Shortcuts are in place to help player make faster deliveries

Traps:

- Integrate competitor roadblocks, malfunctioning machinery, and environmental hazards.

- Place traps strategically to challenge players and add excitement to gameplay.
- Ensure traps are balanced to provide a fair challenge without overwhelming players.
- Traffic, or fights on the road can delay delivery.

Item Placement:

- Strategically position food delivery items and interactive elements throughout the city.
- Talk with NPCs to get your order ready.
- Repair shops and charging stations are placed as well.
- Players must pick up and drop off orders they are going to deliver
 - Specific building allocated for player to pick up order
 - Different orders go to different drop off sites.

Power-Ups:

- Implement temporary advantages such as speed boosts, shield barriers, and repair kits.
- Distribute power-ups strategically to balance gameplay and maintain challenges.
- If player needs to upgrade vehicle, must go to specified location (Vehicle upgrade shop)
- Certain powerups can only be unlocked after talking to NPCs about some secrets of the city.

3) Level Components

1. Level Geometry
 - Buildings
 - Delivery order
 - Robot Models (Player/Customer/Enemy)
 - Dropoff Point
 - Road blocks
 - Repair shop
 - Mini-Map
 - NavMesh - for routes
 - Patrolling Drones for indoor maps - selected levels
2. Characters and Topology for animation

Player Character - Delivery Robot:

- Designed for efficient transportation of food orders within the city.
- Follows different routes based on optimal delivery time.
- Visits the repair shop when health is low or requires maintenance.
- Visit Vehicle Upgrade Shop for vehicle enhancements.

- Utilizes shortcuts to expedite delivery time.

NPC Characters - Citizens:

- Shop owners and local citizens of cybercity.
- NPCs may reveal secret powerups or brownie points.

NPC Characters - Fighters:

- Disrupt player's gameplay by causing delays in delivery.
- Encounters with NPCs prolong delivery time for the player.
- NPCs may engage in combat or obstruct the player's path.

Vehicles - Traffic:

- Adds to the challenges by creating traffic congestion.
- Encounters with traffic vehicles increase delivery time.
- Players must navigate through traffic to reach delivery destinations efficiently.

3. Character animations

- Idle
- Running
- Getting on Vehicle - Bike
- Getting off vehicle
- vehicle crashes
- Vehicle repair
- Characters fighting
- Satisfied/Unsatisfied emotions
- Player jumping

4. Animations for Room, Puzzle & Artifact.

- Order pickup
- Order completion/Customer delivery
- damage/repair of player/robot
- Roadblocks

5. Minimap System

- Detailed routes using Unity's Navmesh to help guide the player around the city
- Indicators of where the player's bike is, or where enemies might be.

6. Patrolling AI Drones

- Simple FSM AI drones that patrol certain indoor sections of the map.
- Detection will lead to a failed delivery.
- Drones can be disarmed with a grenade.

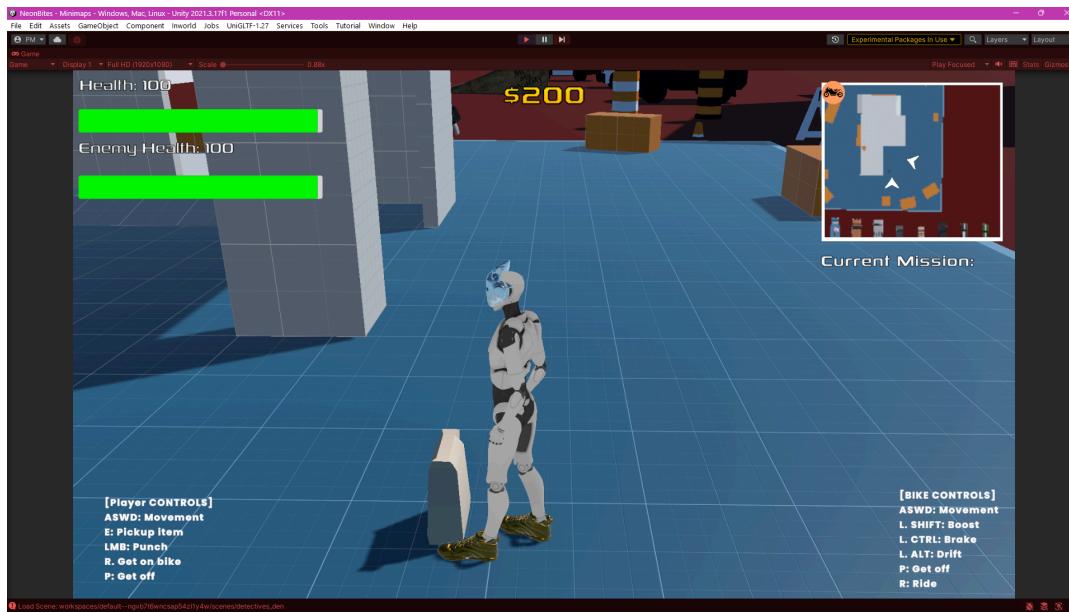
4) UI Design

Instances where UI principles were broken

- Pranav Pushkar Mishra
 - Pickup / Dropoff instructions

Principle broken: **Feedback**

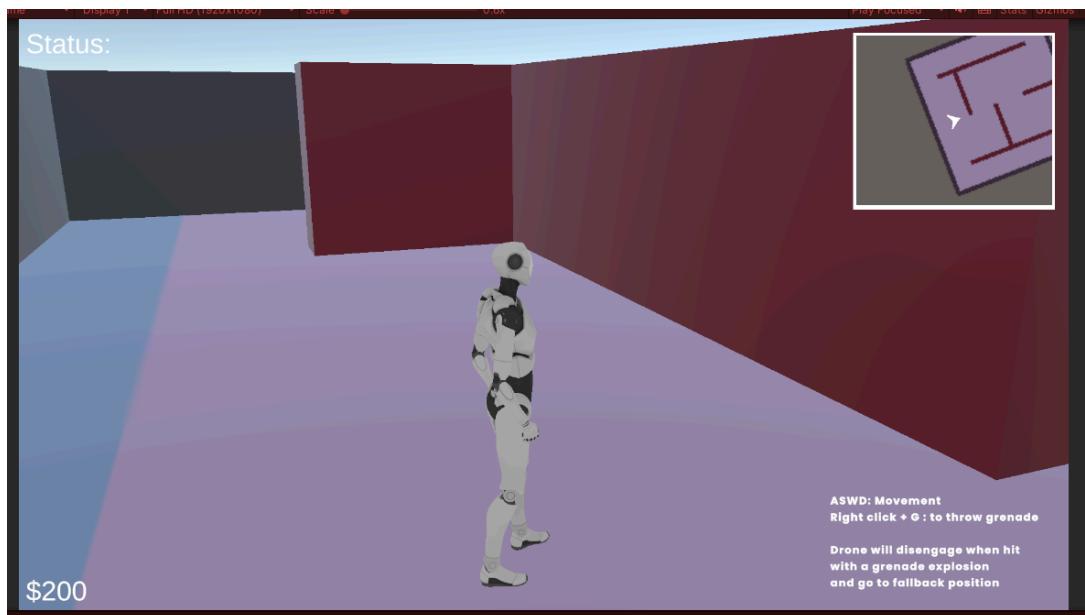
Snapshot: There is no indication if player can pickup the item



- Throw grenade, lack of clarity

Principle broken: **Clarity**

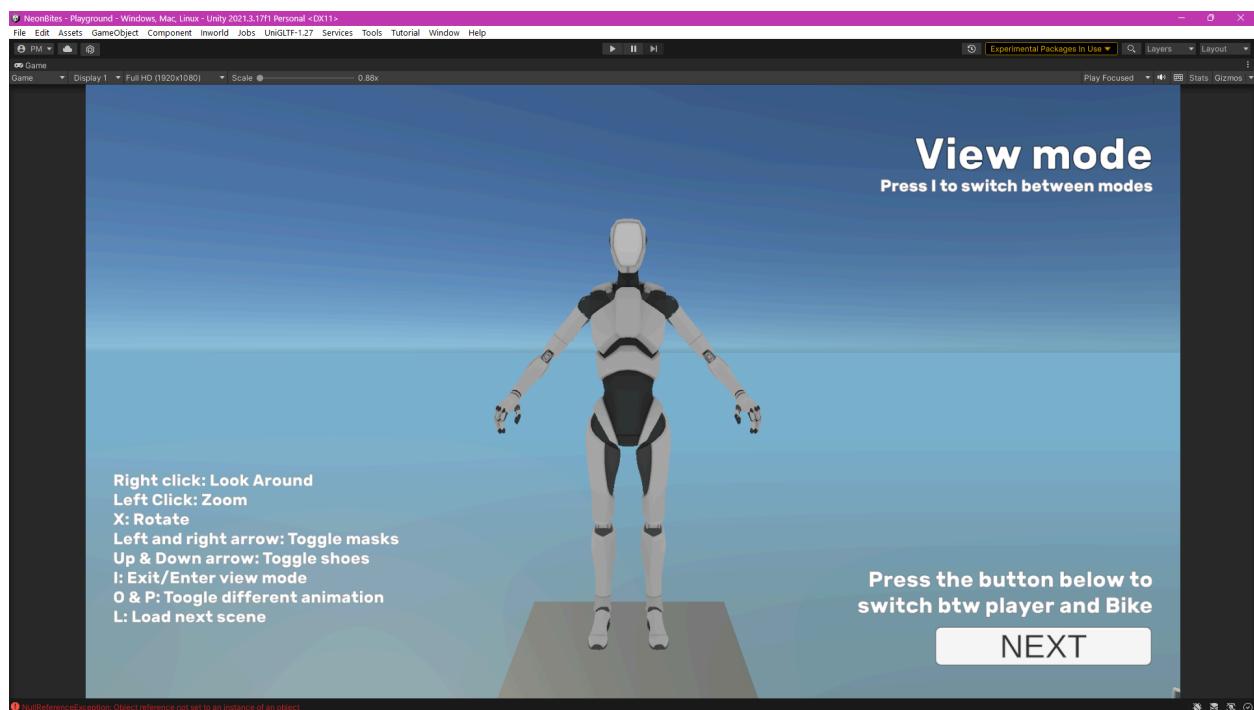
Snapshot: There is no clarity if the grenade is active to be launched.



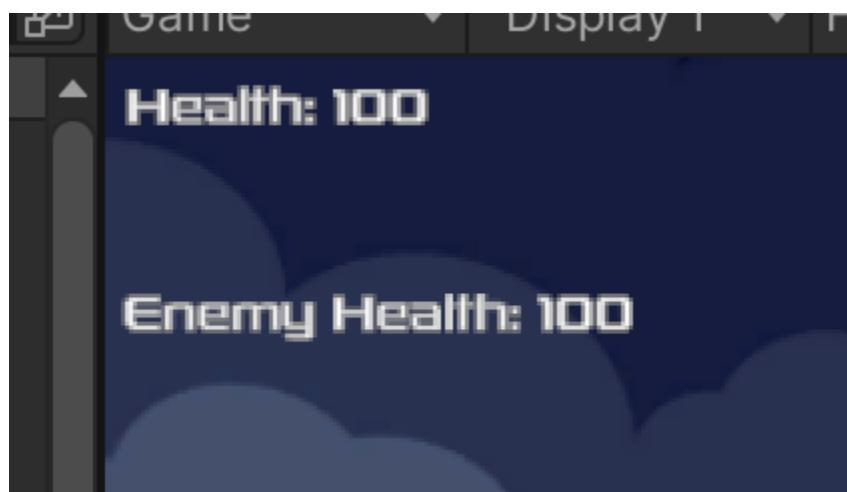
- Customization scene.

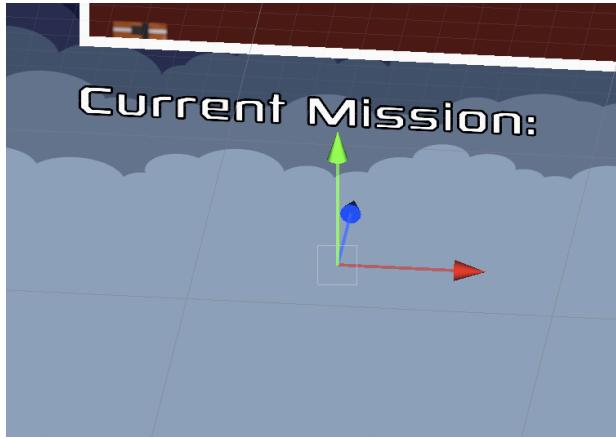
Principle broken: **Clarity**

Snapshot: The button is visible even when not interactable



- Bianca Jankiewicz
 - Enemy/Player Health not clear enough
 - **Principle Broken: Clarity**





- No way to cancel mission
- **Principle Broken:** Error Recovery



- Money indicator could look different from other UI elements, no indicator that you increment money
- **Principle Broken:** Feedback
- Alexa Osuna
 - Lighting of overall game was the same at all times
 - No indication of time of day
 - Audio for time of day overlapped

FIXES:

Pranav Pushkar Mishra:

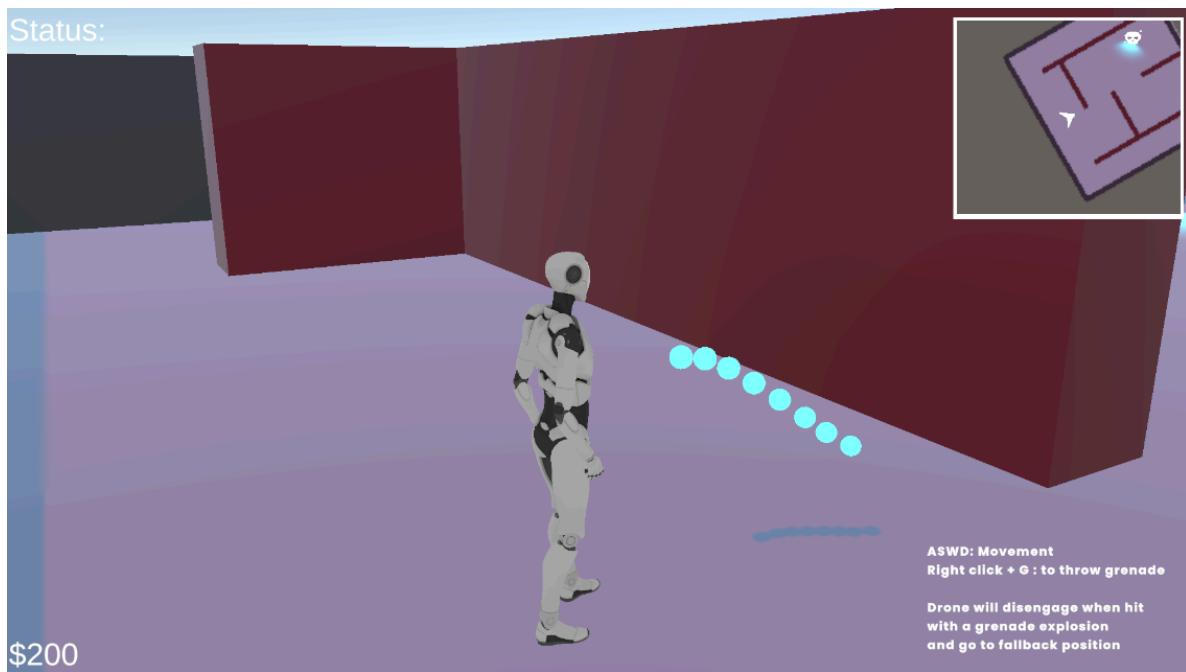
- Pickup / Dropoff instructions

Snapshot: Clear feedback to player to pickup item



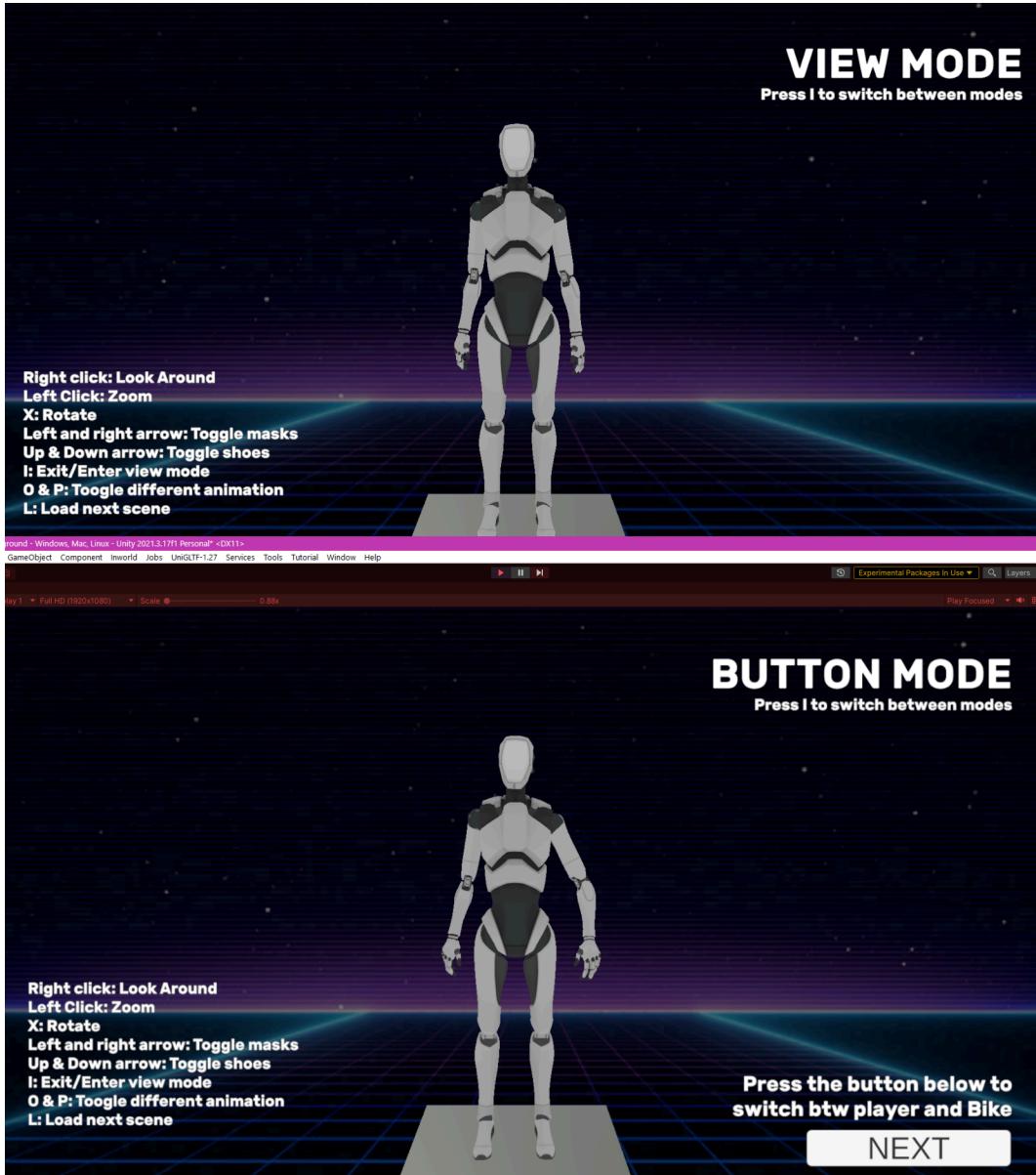
- Throw grenade, lack of clarity

Snapshot: When pressing right click, a grenade path is now visible



- Customization scene.

Snapshot: Button is only visible when it is interactable



Bianca Jankiewicz

- Updated Money counter to have animation, sound, and color to stand out more



- Updated status to include a cancel delivery button



- Updated health to be a health bar instead of a number



Alexa Osuna

- Added a day & night cycle that changed lighting of game

Night:



Day:



- Added a text indicating what time of day it is



- Added individual checks depending on time

5) Sound Design

Reference Game: [Lake](#)

Why we picked Lake

Lake is a similar game where the player delivers packages, mail, and talks to NPCs around the world. The most striking difference between Lake and our game 'NeonBites' would be energy and urgency. Lake is meant to be calming and serene. Our game aims to induce anxiety and sense of urgency with cyberpunk aesthetics

- On a sheet of paper, try to write down each sound you hear. Count how many there are
 1. Background music
 2. Button toggle
 3. Button click
 4. Keyboard clicks
 5. Background noise, from city
 6. Phone ring
 7. Characters dialogues
 8. Truck Door open
 9. Truck door closed.
 10. Truck start
 11. Walking footsteps
 12. Main box open/close
 13. Pause/resume
 14. Door ring
 15. Noise/ Clutter
 16. Truck engine

Sound Critiques:

Pranav Pushkar Mishra

- Button toggle / Button click:
 - **Where/When:** The sounds occur when interacting with UI elements such as buttons, checkboxes, or sliders. They also trigger when navigating through menus or simply moving the cursor over interactive elements.
 - **Impact on Visuals:** The sound provides auditory feedback to the player, enhancing the interactive experience and reinforcing the actions performed on-screen. The impact is

appropriate, as it helps to establish a connection between player input and on-screen feedback, making the UI feel more responsive and engaging.

- **Reason:** These sounds are implemented to provide feedback and confirmation to the player when interacting with UI elements. They help to indicate that an action has been successfully executed, enhancing the player's understanding and control over the game's interface.

- **Repetition:** The sounds may become repetitive if the player interacts with UI elements frequently or performs repetitive actions. Although it's not inherently repetitive, the UI is only used at a player's discretion.

- **Creation:** The sounds could be created using Foley techniques, recording the sound of pressing physical buttons or switches, or synthesized using digital audio software. The sound designer might also layer different sounds to achieve the desired effect.

- **Balance:** In full-out gameplay, the button toggle and click sounds should be balanced with other audio elements to ensure they are audible without overpowering other sounds. Adjustments may be needed based on the game's overall audio mix and the importance of the UI interactions.

- Door Ring:

- **Where/When:** The sound occurs in the game's diner setting whenever a character passes through the main door of the diner. It also adds to the background noise ambiance of the diner environment.

- **Impact on Visuals:** The sound enhances the immersion of the diner scene, providing auditory cues to the player and reinforcing the actions of characters moving in and out of the establishment. The impact is significant as it adds realism and depth to the game environment.

- **Reason:** The door ring sound serves multiple purposes. Primarily, it notifies players of character movement and entrances/exits within the diner, helping to maintain spatial awareness and continuity. Additionally, it contributes to the ambiance of the diner setting, enriching the player's experience and immersion.

- **Repetition:** The door ring sound may become repetitive if characters frequently enter or exit the diner. It is however not the case, as the NPCs are unlikely to be frequent.

- **Creation:** The sound of a doorbell or bell chime could serve as the basis for the door ring sound. Foley recording techniques or digital audio manipulation may be used to refine and tailor the sound to match the aesthetic and atmosphere of the game.

- **Balance:** In full-out gameplay, the door ring sound should be balanced with other audio elements to ensure it is audible without overwhelming the player or competing with other sounds in the environment. Adjustments may be necessary to maintain realism and coherence within the game's audio landscape.

Bianca Jankiewicz

- **Forest sounds (birds, wind rustling the leaves, etc)**

- -Identify where or when the sounds are taking place.
 - The sounds take place when you are particularly close to a forest. While the whole game takes place near the woods, there are some areas that are more rural than others. It gets louder around this area.
- -Try to articulate how you think the sound impacts the visuals. How strong is the impact- is it too strong for the visual element it is portraying?
 - Not at all, it enhances the gameplay by making you feel more like you are back in this rural area from a city. It makes it more comforting and pairs well with the visual elements.
- -Ask yourself why they are taking place. Some should be obvious, others not.
 - They are taking place to first of all represent the woods, but more so to enhance the contrast of the main character returning to her rural home town from a large city, reminding her how much she missed it.
- -If there are no sounds ask yourself, why not?
 - n/a
- -Determine if the sound effects sound repetitive. Ask yourself how the game designers might have been able to reduce that repetition.
 - Not really, it sounds unique but also similar enough to where you couldn't recognize if it's a pattern or not. The sound of the wind is versatile, it's not as consistent as real life, but birds chirping is fairly repetitive in a realistic way.
- -Think about how they might have created each particular sound.

- There are a lot of ways they could have recreated the leaves rustling, crunching leaves, or even capturing the real thing. Same goes for birds, could be a person whistling or could be real birds.
- **–Listen to how well balanced all the sounds are in full-out gameplay. Are some sounds too loud or too quiet because they are drowned out by other sounds?**
 - Sometimes it feels a bit overwhelming but it mostly adds to the atmosphere and overall feel of the game.
- **Van Engine**
 - **–Identify where or when the sounds are taking place.**
 - When the mail van is running and the character is nearby.
 - **–Try to articulate how you think the sound impacts the visuals. How strong is the impact- is it too strong for the visual element it is portraying?**
 - It adds to the realism that the mail van is sort of old. It has a clunky, vintage, element. I don't think it's too strong for the visual element it's portraying, since older vans are realistically louder if the engine is old.
 - **–Ask yourself why they are taking place. Some should be obvious, others not.**
 - It's taking place because you are near a running van. In a deeper sense, it's just a reminder that the main character has aged and things in this town are older like a time capsule in contrast to her new life where everything is newer.
 - **–If there are no sounds, ask yourself, why not?**
 - n/a
 - **–Determine if the sound effects sound repetitive. Ask yourself how the game designers might have been able to reduce that repetition.**
 - Yes, sometimes it can be repetitive. Maybe adding more inconsistencies to the engine as it's not always realistic for an engine to be consistently the same volume/pattern.
 - **–Think about how they might have created each particular sound.**
 - They likely used the sound of a real vehicle engine.
 - **–Listen to how well balanced all the sounds are in full-out gameplay. Are some sounds too loud or too quiet because they are drowned out by other sounds?**
 - I think it sounds balanced overall, sometimes it sounds a little loud but again, it adds to the realism.

Alexa Osuna

● **Character Dialogue**

- **–Identify where or when the sounds are taking place**
 - Takes place whenever a player encounters a character they are making a delivery to, whenever the player is alone and encounters some kind of item, or whenever the player goes to make a delivery to a place where nobody answers.

- **–Try to articulate how you think the sound impacts the visuals. How strong is the impact- is it too strong for the visual element it is portraying?**
 - The character dialogue blends in perfectly with what the player is doing. For example, if the player is making a delivery to someone, character dialogue begins where the two have a conversation which works out perfectly because without any audio not only would the character be looking at each other and moving their mouths, but the person playing the game will have to read lots of text.
- **–Ask yourself why they are taking place. Some should be obvious, others not.**
 - In terms of this game, a character usually speaks to move the game along. For example, if a player delivers a package to a home where nobody answers the door, rather than waiting until someone shows up, the player's character speaks saying that they will leave the package at the door thus moving the story alone.
- **–If there are no sounds ask yourself, why not?**
 - In instances where the player/ characters are not speaking, it's usually because there's no need for it because the player has to do something to invoke character dialogue such as complete a task of delivering an item.
- **–Determine if the sound effects sound repetitive. Ask yourself how the game designers might have been able to reduce that repetition.**
 - The game designers could have been able to reduce the repetition that comes from delivering a package to a person by having the person expecting the package just standing there doing nothing before the player arrives.
- **–Think about how they might have created each particular sound.**
 - Each dialogue could have come from actual people having conversations which were implemented into the game itself. However, they were most likely more scripted to fit the terms/ scenario of the game based on who each character is.
- **–Listen to how well balanced all the sounds are in full-out gameplay. Are some sounds too loud or too quiet because they are drowned out by other sounds?**
 - When two characters are talking, there seems to be a light white noise in the background. This sound is drowned out by the conversation which in terms of what is going on (characters speaking to one another) makes sense as to why the character dialogue is a lot louder or at least sits on top of the background noise.

● **Footsteps**

- **–Identify where or when the sounds are taking place.**
 - The sounds are taking place every time that the player is moving in a certain direction.

- **-Try to articulate how you think the sound impacts the visuals. How strong is the impact- is it too strong for the visual element it is portraying?**
 - The sound of footsteps impacts the visual because it makes the overall game more realistic. If there weren't the sounds of any footsteps, it would take the realism out of the game seeing as the character would be moving and there would be no sound indicating that.
- **-Ask yourself why they are taking place. Some should be obvious, others not.**
 - The sounds of footsteps can be heard because the player is walking/ moving.
- **-If there are no sounds, ask yourself, why not?**
 - We cannot hear the sound of footsteps when the player is driving because we hear the sound of an engine instead. Also, when there is character dialogue because they're not moving. In general, if the player is not freely walking, we can't hear the sound.
- **-Determine if the sound effects sound repetitive. Ask yourself how the game designers might have been able to reduce that repetition.**
 - The game designers reduced the repetition of footsteps by changing the sound effects based on whatever it is the player was walking on. For example, if they were walking on concrete, we were able to hear normal footsteps. If they walked on anything wood such as wooden steps, we can hear the sound of the wood creaking with each step.
- **-Think about how they might have created each particular sound.**
 - Each particular sound could have been created by listening to how different each step sounds depending on what someone is walking on.
- **-Listen to how well balanced all the sounds are in full-out gameplay. Are some sounds too loud or too quiet because they are drowned out by other sounds?**
 - If the player is walking outside, outlying factors such as city sounds drown the sound of the footsteps. However, even though these outside forces drown out the footsteps, we are still able to hear them faintly.

SOUND IMPLEMENTATION

- 1) In your design document, document the sounds you created for the game, the sounds you rejected. Explain how the sounds were created. Explain why in the end you accepted or rejected certain sounds

All the sound effects were downloaded from free resources on the Internet. Example:

<https://mixkit.co/free-sound-effects/alarm/>

- Added sound effect to Drone AI, where it plays a alarm-like sound effect when it detects the player.
- Added sound effect to Drone AI, where it plays a faulty-static scratch like sound effect when it suffers damage from the player.
- Added a “kaching” money sound for when the player successfully completes a delivery to add a level of achievement for the player.
- Added sound effects to bike. These include startup sound of bike engine, one static and constant sound that plays when the bike is on, and one boost sound effect which sounds like the engine accelerating.
- Added an audio clip of crickets to indicate night time. Sound of crickets playing are created when the sun rises, or when the time of day is 18:00/6:00 p.m. This sound was accepted because it's a universal sound used in different movies, games, etc. to portray it being night time.
- Added an audio clip of chirping birds and city traffic to indicate day time. These two sounds play simultaneously when the sun rises at 7:00 a.m. These sounds were accepted because they are typical things you would hear in a city during the day, seeing as it would be busy with life from people or vehicles going about their day.

6) Alpha Release Notes

Round 1 Testing

- **Tester 1: Franco**

- Player is able to customize masks & shoes on their own
- Walks around trying to find out what to do
- Needs instructions on how to navigate with NPC (near cafe)
- Able to pick up package without help
- Asked if bike was rideable
 - Needed further instruction on how to use bike
- Is able to navigate around map
- Asks how to damage drone
- Asks questions in regards of what happens after making first delivery
- Once player got hang of how to navigate around on foot/ with bike did so with ease
- Liked animation when player falls off bike
- Confused on what to do when starting 2nd time when they went to test fighting AI

- Was able to fight enemy with given instructions of clicking to fight
- Asked if there was a way to regenerate health
- Thought game was about 70% with need to minor fixes

Round 2 Testing

- **Tester: Ahmed**
 - Player was able to change mask & shoes with ease
 - Required instructions to be able to choose bike
 - Player was able to go to NPC, needed instructions to proceed
 - Didn't know they had to actually speak to NPC to interact with it
 - Player needed instructions on how to do delivery in patrol scene
 - Instructions needed on how to disengage drone
 - Had questions about the health
 - Seemed engaged by visuals of game
 - Wanted game to be more clear
 - Make controls more clear/ straightforward
 - Liked overall design of game
 - Wanted timer in game
 - Thought it was an overall game, but still needed a few fixes
 - Was curious on functionality of NPC & being able to talk to them
 - Very engaged with different functionalities of how to interact with NPC
 - Was able to cover most of game within 8 minutes

Round 3 Testing

- **Tester: Hal**
 - Player was able to figure out how to work view modes when customizing mask/shoes
 - Was able to switch between the different modes of game, did need further instruction on to which each meant
 - Found UI a bit confusing at first but was able to get a hang of it shortly after
 - Needed further instruction on how to actually start the game itself
 - Was able to walk around & navigate camera without much instruction
 - Was able to use map to discover there task
 - Liked that it tells controls on screen such as when picking up object
 - Found mini-map helpful
 - Found mini map to be a bit over reliant but found it helpful as they used it to discover what to do

- Was confused on what to do but once they looked at map they realized they were able to head in certain directions
- Had questions about red dots in scene
- Seemed confused on how to interact with NPC
 - Needed further explanation
- For dialogue mechanic, liked 2 speech bubbles to indicate conversation that was loading
 - Outside of waiting for a response, said it was unclear as to why it was there
- Was eager to jump back into game speaking to NPC & waiting for error
- Noticed control for bike wasn't listed on list of controls on screen
 - Wouldn't have known bike was rideable
- Thought controls can be smoother in terms of turning while on bike and moving camera
- Knew to avoid drone in patrol scene
- Liked maze for deliveries
- Liked UI with skull on map, knew that it was something they should navigate away from
- Difficulty moving
- When picking up order, the map instantly told them where to go
 - Had questions on how to do this outside of using map
- More UI explanations on certain controls
 - Controls on sprinting
 - Telling the user other things they can do
- Asked if they could attack drone in patrol scene
 - Couldn't tell the first time around because they initially stayed away from it as they were able to tell it was dangerous
- Fighting enemy
 - Seemed unsmooth
 - Didn't know how to attack
- Was able to get through most if not all functions of game within 12 minutes
- Delivery part was clear, they knew where to go & what to do with package
- Combat aspect was unclear, no indication of fighting coming up anywhere on map
- Wanted time limit to make game more challenging
 - Thought that onscreen timer would help

Beta Updates to do:

- 3 shaders each

- Highlighted object - Bianca
 - Arrow shader - Alexa
 - Pranav
- Time Limit
- Complete Level Design - Bianca 1st
 - AI Cars
- Menu
 - Pause Menu - Menu
- Instruction text on what to do (combat indicator, pickup indicator) - Bianca
- When player is lower health they are slowed - Bianca c v
 - Regeneration Item to increase health - Alexa
- End scene
- Order Interface - Pranav
- NPC Interactions - Pranav

7) Beta Release Notes

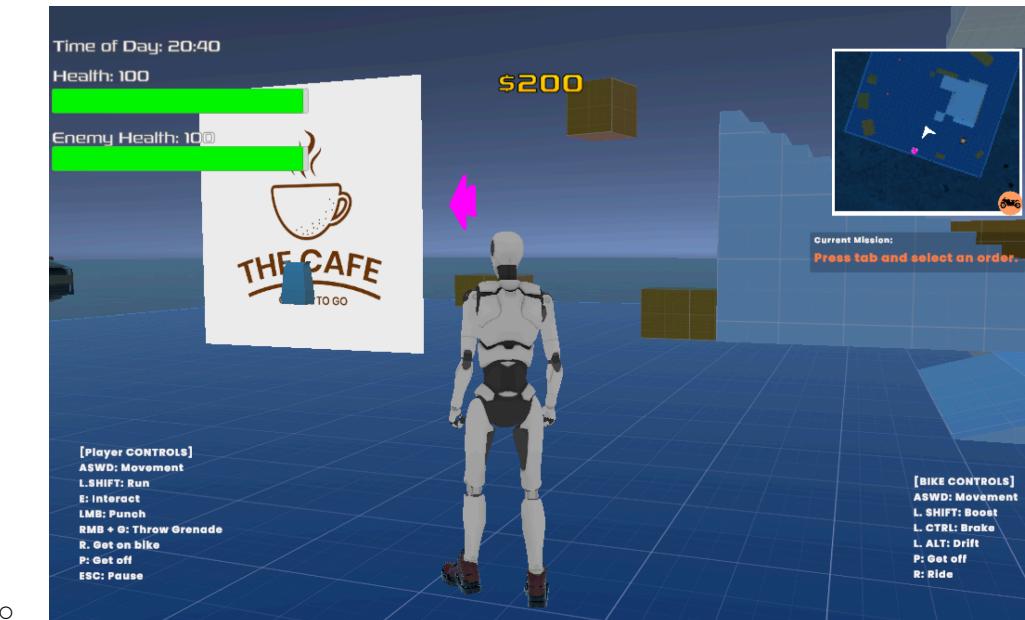
- map and level have been updated with more buildings and obstacles.
- Mission selecting UI has been added with a phone UI in game.
- Tutorial added as a semi-level
- customization scene is vastly improved
- game menu added with controls and way to start the game or tutorial
- Pause menu added to game
- NPC interaction has improved vastly. Additional cameras were added.
- Added credits as well as introductory text bodies in the game.
- All the scenes are linked properly, finishing the layout of the game.
- SHADERS
- added a black & white shader in the game to indicate locked items.



- Highlight shader added to delivery object



- Added an arrow shader which points towards: Arrow pointing towards package should be outlined in a darker yellow color and the arrow is filled with a lighter shade of yellow



8) Beta Feedback and Public Demo

What you learned from your beta release and from your public release:

We learned that even simple instructions can be misinterpreted at times, highlighting the importance of clear and intuitive UI design. The feedback from our beta release and public demo emphasized the value of incorporating user feedback into UI improvements to enhance overall usability.

What you are most proud of about your game:

We are most proud of our team's timely execution and the fact that we exceeded our initial plans for the game. Despite facing challenges and having to backtrack on certain ideas, we managed to accomplish more than we initially anticipated, demonstrating our commitment and adaptability.

What changes you made to your original game design for technical reasons and why:

We decided to remove the bike mechanic from our original game design due to its complexity and the limited time available to design a suitable level for its implementation. This decision was made to prioritize the development of other core features and ensure a smoother gameplay experience.

We also had to change the customer combat design. We originally had the player combat the customer if the order was incorrect, however this became a challenge when dealing with multiple enemies and when players were to change deliveries half way through the game.

What changes you made to your original game design for playability reasons and why:

Based on feedback from playtesters, we made several adjustments to improve playability. These changes included refining the UI to provide clearer instructions and enhancing the overall level design to create a more immersive and engaging experience for players.

We shrunk the original city down as well. Our original design was much larger and accommodated the bike mechanic. The bike implementation was not as seamless as we anticipated and was difficult to navigate, this led us to shrinking down the city and having deliveries accessible by foot, along with implementing shoes as a speed boost.

What did you learn from your playtesters? What changes did you make to your game as a result of the playtesting?

Playtesting provided valuable insights into player preferences and pain points. We learned the importance of providing clear and concise instructions to guide players through the game. As a result, we made adjustments to the UI and level design to address these issues and improve overall player experience. This also led us to creating our tutorial scene so users could practice before they actually began playing the game.

What you would do next if you had more time:

With more time, we would focus on designing a proper level with intricate lighting and interactive elements suitable for a cyberpunk-style city. This would involve creating a rich environment that immerses players in the futuristic world of NeonLights City. Also implementing more customer interactions and adding more challenges to the actual delivery.

What you would do differently next time:

Moving forward, we would plan out our level design first and work the rest of our game functionality around this. Changing around the level design so late on in the design process definitely added some unforeseen challenges in the way the player interacts with the objects and NPCs. Additionally conducting more playtesting on our own time as we continued to add functionality and new features. Although we had our class beta/alpha testing we were not

able to test features we added after, so having additional testing would allow us to review our changes with a user base. Having better internal documentation among our team for what changes we have made and why and to help keep the process more organized would have been beneficial as well. Potentially utilizing an organized server with channels would be useful in the future.

Timeline Schedule

Week 1 (March 13 - March 19):

- Player Character Movement: Implement basic movement mechanics for the player character, including running, jumping, and bike riding.
- Pickup System: Develop functionality for the player to pick up food orders and items within the game environment.

Week 2 (March 20 - March 26):

- Minimaps and Routing System: Create minimaps and implement a routing system to guide the player to delivery locations efficiently.
- Time and Resource Management: Introduce time constraints and resource management mechanics, such as managing fuel and time limits for deliveries.

Week 3 (March 27 - April 2):

- Enemy Encounters: Implement enemy NPCs and obstacles for the player to encounter during deliveries, such as roadblocks and criminal-infested areas.
- Combat Mechanics: Develop combat mechanics for the player to engage in fights with enemies when necessary, protecting themselves and their deliveries.

Week 4 (April 3 - April 9):

- Sound and UI Design: Integrate sound effects and background music into the game, as well as design and implement user interface elements for a polished player experience.
- Alpha Release: Prepare and submit the alpha version of the game, featuring basic gameplay mechanics and levels for testing and feedback.

Week 5 (April 10 - April 16):

- Testing and Bug Fixing: Conduct thorough testing to identify and fix any bugs, glitches, or gameplay issues present in the alpha release.
- Beta Release: Submit the polished beta version of the game with all levels and mechanics fully implemented, ready for final testing and feedback.