|  |  |
| --- | --- |
| **Game Production**  Diploma in IT  Year 2 (2023/24) Semester 3 | Week 4 |
| **1.5** hours |
| **Workshop 5: Game Mechanics** | |

*Game mechanics* define how a player interacts with a game, and are the core of what a game actually is. They are what remains from a game once you strip away all of the aesthetics, technology and story.

Explore the following random game mechanic generator:

* <https://inventwithpython.com/blog/2012/07/30/need-a-game-idea-a-list-of-game-mechanics-and-a-random-mechanic-mixer/>

Read and understand all of the mechanics listed on the above website. Note that the list is not exhaustive (this list favours action game mechanics) – there are plenty of other mechanics not listed.

Do the following:

1. Pick 2 mechanics from this list that you tend to enjoy, and explain why you enjoy them. For each mechanic, provide examples of games you enjoy that use it.
2. Pick 2 mechanics from this list that you tend not to enjoy, and explain why you do not enjoy them. For each mechanic, provide examples of games that use it.
3. Use the random mechanic generator on the website, and brainstorm a game idea based on the generated mechanics. Describe your game idea. Feel free to re-generate the mechanics for a new idea if necessary.

Share your answers on your Portfolio website.

1. 2 mechanics I tend to enjoy are Mouse Dexterity and Race.   
   I enjoy the mouse dexterity mechanic for its satisfying and challenging physical interaction. It requires precise hand-eye coordination and offers a sense of control. Games like Fruit Ninja exemplify this mechanic, where players use the mouse to slice fruits and avoid bombs. Swift and accurate mouse movements are essential in this fast-paced game, creating an engaging experience that tests reflexes and precision. Mouse dexterity brings an adrenaline rush and a feeling of accomplishment when successfully executing the required actions. It combines skill, mastery, and speed, making it enjoyable and challenging.  
     
   I also enjoy the race mechanic for its competitive nature, urgency, and excitement. It pushes me to strategize, make split-second decisions, and optimize speed and timing. Forza Horizon, a popular racing game series, exemplifies this mechanic through various racing types against AI or online opponents in an open-world environment. It requires skillful maneuvering, knowledge of physics, and strategic decision-making to outmaneuver opponents and secure victory. The dynamic and immersive race mechanic in Forza Horizon keeps me engaged and entertained, providing a thrilling experience.
2. 2 mechanics I tend to not enjoy are Brawling and Game Keeps Gets Harder Until You Die.  
   I tend to not enjoy the brawling mechanic when it involves complex combos and intricate move sets. Games like Brawlhalla, which have numerous combos and require precise inputs to execute them, can be overwhelming and challenging to learn. While some players may find satisfaction in mastering these complex mechanics, I personally find it difficult to keep up with the intricacies and timing required for each move. It can lead to frustration and discouragement, especially when playing against skilled opponents who have already mastered these combos. The learning curve associated with intricate brawling mechanics can be steep and may deter casual players or those seeking a more accessible and straightforward gameplay experience.  
     
   I also tend to not enjoy the mechanic of games that continuously increase in difficulty until the player's eventual demise. This mechanic can create a sense of frustration and hopelessness, as it becomes increasingly challenging to progress or achieve a higher score. Games like Tetris, which keep getting harder as the player progresses, can reach a point where the challenge becomes overwhelming, making it difficult to keep up and leading to an inevitable defeat.

Game Idea: Gravity Wars

Mechanics:

Gravity

Bouncing Object

Protect a Target

Description:

Gravity Wars is a fast-paced action game set in a futuristic space environment. The player takes on the role of a skilled pilot controlling a small spacecraft. The game combines the mechanics of gravity, bouncing objects, and protecting a target to create a unique and challenging gameplay experience.

The objective of the game is to protect a vital space station from incoming enemy attacks. The space station, which serves as the target, is located in the center of the screen. Waves of enemy ships and projectiles approach from all directions, posing a threat to the station's integrity.

The player's spacecraft is equipped with a gravity manipulation device, allowing them to alter the gravitational forces in the environment. By strategically activating the device, the player can attract or repel objects within a certain radius around their ship. This mechanic is essential for manipulating the trajectory of bouncing enemy projectiles and redirecting them away from the space station.

As the player deflects enemy projectiles, they must also navigate the chaotic battlefield, avoiding collisions with both hostile ships and unkillable obstacles that litter the space. The bouncing objects, influenced by the player's gravity manipulation, bounce off walls and other objects, creating a dynamic and unpredictable environment.

To aid the player in their mission, power-ups and upgrades can be collected throughout the gameplay. These enhancements may improve the gravity manipulation device, increase the ship's firepower, or provide temporary shields to withstand enemy attacks.

The game features different levels with increasing difficulty. As the player progresses, new enemy ship types with unique attack patterns and behaviors are introduced. Additionally, environmental hazards such as asteroid fields or gravitational anomalies may affect the gameplay, requiring the player to adapt their strategies accordingly.

The goal is to survive as long as possible and protect the space station from being destroyed. The game tracks the player's score based on the number of enemies defeated, projectiles deflected, and the time spent successfully defending the space station. Players can challenge themselves to achieve higher scores, compete on leaderboards, and unlock additional spacecraft and customization options.

Gravity Wars offers a compelling combination of strategic decision-making, precise control, and rapid reflexes. By leveraging the mechanics of gravity manipulation, bouncing objects, and target protection, players can experience a thrilling and intense space battle that tests their skills and tactical prowess.