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| **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.

i) I enjoy block puzzles because they require logical thinking, planning, and spatial awareness. They provide a satisfying challenge as I try to figure out the best way to move and arrange the blocks to solve the puzzle. Tetris is a classic example of a block puzzle game that I enjoy. It requires quick thinking and reflexes to fit the falling blocks into the available space. Another game I enjoy in this category is Sokoban, where the player must push boxes to designated locations, navigating obstacles, and finding the optimal path.

ii) Another mechanic I tend to enjoy is undirected exploration as they provide a sense of freedom and discovery. It's exciting to have a large map or world to explore at my own pace, uncovering secrets, finding hidden items, and unlocking new areas. The Metroid and Castlevania series are examples of games that employ undirected exploration mechanics. These games allow players to explore interconnected levels, acquire new abilities, and gradually unravel the game's world and story.

1. 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.

i) I tend not to enjoy bullet hell games because they often overwhelm me with a high density of projectiles on the screen, making it difficult to navigate and survive. While the challenge can be thrilling for some players, I find it overwhelming and frustrating. Examples of bullet hell games include titles like "Ikaruga" and "Touhou Project," where players must navigate intricate bullet patterns while simultaneously attacking enemies.

ii) Another mechanic that I not really enjoy is mouse dexterity as I find it more challenging to maintain accuracy and control with a mouse compared to a gamepad or keyboard. Games like "Fruit Ninja" and "Simon Gesture" require quick and precise mouse movements to slice fruit or replicate specific gestures accurately. While these games can be engaging for some players, I prefer mechanics that focus more on strategy or exploration rather than pure dexterity.

1. 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.

**Game idea:**

In this game, players have the ability to manipulate gravity. The game takes place in a futuristic city where gravity has gone haywire due to a scientific experiment gone wrong. As a result, players are equipped with a special gravity manipulation device that allows them to control the direction and intensity of gravity for themselves and certain objects in the environment.

Players navigate through various levels, each filled with challenging platforming sections, puzzles, and enemies. The objective is to reach the end of each level while utilizing gravity manipulation to overcome obstacles and defeat enemies.

**Mechanics:**

1. Gravity Control: Players can toggle between normal gravity, zero gravity, and even reverse gravity at will. This ability enables them to walk on walls and ceilings, float across large gaps, and disrupt enemy movements.

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