

CORE MECHANICS:

In game programming, core mechanics refer to the fundamental elements and systems that drive the gameplay and interactions within a video game. These mechanics define how the game functions, how players interact with the game world, and what makes the game unique and enjoyable

- 1. Player Controls:** How players move, aim, and interact with the game world. This includes character movement, camera control, and any other input mechanisms.
- 2. Game Physics:** The rules that govern the physical behaviour of objects in the game, including gravity, collisions, and momentum. Physics can be realistic or stylized, depending on the game's design.
- 3. Object Interaction:** How players interact with in-game objects, such as picking up items, opening doors, or activating switches.
- 4. Combat Mechanics:** If the game involves combat, this includes the rules for attacking, defending, and using weapons or abilities. It also covers health and damage systems.
- 5. AI (Artificial Intelligence):** The behaviour and decision-making of non-player characters (NPCs) or enemies in the game. AI determines how these entities react to the player's actions and make decisions based on the game's goals.
- 6. Level Design:** How levels or game environments are created, including the layout, obstacles, puzzles, and challenges. Level design influences the player's progression and experience.
- 7. Game Rules and Logic:** The underlying logic that defines the game's rules, objectives, and win/lose conditions. It includes scorekeeping, quest systems, and any other gameplay rules.

8. **User Interface (UI):** The interface elements that players use to navigate the game, including menus, HUD (Heads-Up Display), and any on-screen indicators or information.

9. **Progression and Rewards:** Systems for character progression, such as experience points, character customization, and the rewards that players earn for completing tasks or achieving goals.

10. **Economy and Resource Management:** If the game involves resource collection or management, this includes systems for acquiring, spending, and using in-game resources, like currency, items, or energy.

11. **Multiplayer and Networking:** If the game supports multiplayer, the core mechanics will include the networking code and communication between players.

12. **Storytelling and Narrative:** Mechanics related to the game's narrative, including dialog systems, branching storylines, and character development.

13. **Sound and Music:** How audio is implemented in the game, including music, sound effects, and voice acting.