Exp 01: Pokemon Go and AR technology

1. Description of the game (in this case pokemon go)
   Pokémon Go is a location-based augmented reality (AR) game where players use their smartphones to hunt, capture, and battle virtual Pokémon overlaid on the real world. It popularized AR in mainstream gaming by blending physical movement with digital collection mechanics, though AR capture often proved less efficient than non-AR modes, leading most players to disable it for practicality.

2. Technology used
   The game leverages ARKit (iOS) and ARCore (Android) for immersive overlays, enabling features like surface detection and environmental integration. Additional tools include occlusion for realistic depth, GPS for location-based spawns, and minigames for Pokémon capture and buddy interactions.

3. Working principle
   AR integrates the physical environment by anchoring Pokémon to real-world surfaces via camera feeds and sensors. Capture involves locating/tapping the creature to initiate a throwing minigame, while buddy features require scanning to place Pokémon spatially; however, these add labor, often making non-AR play preferable despite promotional hype around AR realism.

4. A simplified algorithm of the game

text

Initialize player location via GPS

While in AR mode:

  Detect surfaces using ARKit/ARCore

  Spawn/position Pokémon on detected plane

  Player taps Pokémon → Start capture minigame

  Throw PokéBall (aim via device tilt) → Check hit/probability

  If success: Capture → Update inventory

  Else: Retry or flee

End AR session if toggled off for efficiency

Sync data to server for multiplayer