Computer Games

CS134

Chris Pollett

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Outline

- Features of a Successful Program
- Game Design
- Playable Games
- Pop framework

Features of a Successful Program

- **Concept** -- What makes the game fun to play? Is the idea behind it orginal and interesting?
- **Interface** -- How does the player interact with the program? How intuitive and easy to use is it?
- **Documentation** -- Do the supporting documents make it easier to get more out of the game?
- **Stability** -- How long can the game go without crashing or having a glitch to take user out of game?

Game Design

- Skills need to draw on:
  - Graphics
  - Physics Simulation
  - AI
  - Art
  - Sound
  - Interface
  - Optimization

Example

- For the interface need to choose dimensionality of motion. That is:
  - How many dimensions player character can move
  - How many dimensions world moves in
  - How many dimensions the presentation moves in
  - For PacMan get 1.25, 1.25, 0. A flight simulator might be 3, 2.5, 3

Game playability

- Requires:
  - Good interface.
  - Instant feedback
  - Player needs to know how well they are doing
  - There should be clear goals
  - Game should allow for advances and setbacks
  - Game should involve strategy as well as dexterity
  - There should be different tools available for the player
  - Things should not happen non-humanly fast

Pop framework

- Built off MFC
- Framework consists of a number of classes organized into useful patterns for development
- Some of the requirements that went into its design:
  - Allows for multiple windows
  - Allows for resizing of windows without messing up the game
  - Allows easy use of menus and toolbars to influence game parameters
  - Allows flexible use of graphics subsystem

Pop demo