CS 351 – Design of Large Programs

Dominos Design

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Design

Main (GUI or Console)

Board

Player PLayer

Domino Tile

Trigger: update from mouse or keyboard cdדשדשsdkey oor key

Active component

Main GUI:

This class is the graphical front end of your domino game. It initializes the game environment, including the board and player, and manages user interactions through buttons and visual elements. Waits for player interaction and then acts accordingly. It is responsible for the visual representation of the game state and handling user actions like drawing and playing tiles.

Main Console:

Provides an alternative, text-based to the domino game. It handles game setup and progression in a console environment, accepting user input from the keyboard for game actions and displaying the game state in text form. Control the game loop of the game and, whose turn is it and what is happen at any given time.

Board:

Central to the game's logic, the Board class keeps track of all game components, including the tiles in play on the board, the boneyard (the pool of tiles yet to be played), and the state of both the human and computer players' hands. It controls the flow of the game, determines legal moves, and checks for win conditions. Control the computer turn strategy and player turn logic

Player:

Manages the collection of tiles (hand) for each player. It includes methods for drawing new tiles from the boneyard, playing tiles to the board, and determining possible moves. This class is designed to be extended or used by different types of players in the game, including human players and AI (computer) players.

DominoTile

Represents an individual domino piece. Each piece has two sides, each with a number. Provides functionality to access the values on each side, flip the tile, and compare tiles for equality. Allowing tiles to be played and matched on the board.