

User Guide

Overview

Welcome to Snake, a classic arcade-style game where you control a growing snake navigating a grid-based board. Your goal is to collect food items while avoiding collisions with walls, obstacles, and your own tail.

Installing and Running

1. Download the Game: You should have the file snake.dmg.
2. Install: Open the .dmg file on macOS, drag the Snake application to your Applications folder.
3. Launch: Double-click the Snake app icon. The game starts in Menu Mode, where you can configure game options.

Game Modes and Settings

Upon launching the game, you enter the Menu Mode, which allows you to adjust the following options:

- Board Size: Choose the dimensions of the playing grid. Smaller boards make the game more challenging.
- Number of Fruits: Select how many food items appear simultaneously. More fruits increase scoring opportunities.
- Game Mode: Choose between:
 - Classic – Standard Snake rules with walls that end the game on collision.
 - Pacman Mode – The snake wraps around edges of the board, allowing continuous movement.
- Obstacles: Toggle obstacle generation. Obstacles appear as stationary blocks on the grid and require careful navigation.

Use the arrow keys to navigate menu options. Press SPACEBAR to start the game with your selected settings.

Controls

- Arrow Keys ($\uparrow, \downarrow, \leftarrow, \rightarrow$): Change the snake's direction.
- Spacebar: start the game and return to the menu after a game over.
- Mouse Clicks:

- Click the Restart Button to reset the game and return to the menu.
- Click the Pause Button to temporarily pause or resume gameplay.

Gameplay Mechanics

1. Snake Movement: The snake moves automatically in its current direction. The movement speed is configurable via the menu.
2. Eating Food: Move the snake over food items to collect them. Each food increases the score by 1 and grows the snake by one segment. A new food item will appear at a random safe location.
3. Obstacles: Some levels include randomly placed obstacles. Colliding with an obstacle ends the game.
4. Collision Detection: The game ends if the snake:
 - Runs into a wall (in Classic Mode or Obstacle Mode),
 - Runs into itself,
 - Runs into an obstacle.
5. Winning Condition: You win when the snake fills all available free spaces on the board. The game then displays a “You Win!” screen with your final score.

Game Interface

- Score Display: Tracks your current score during gameplay.
- Record Display: Shows the highest score achieved in previous sessions.
- Pause Indicator: When paused, the game halts, but the snake retains its position and direction.

The game automatically handles movement, collisions, and food generation. All obstacle and food positions are safely generated, ensuring that the board is never immediately blocked or unsolvable.

Game Over and Win Screens

- Game Over Screen: Displays when you collide with a wall, obstacle, or your own tail. Shows:
 - “GAME OVER” message
 - Final Score
 - Record Score

- Instructions to return to the menu (SPACEBAR)
- Win Screen: Shows when the snake consumes all available food. Displays:
 - “YOU WIN!” message
 - Final Score
 - Instructions to return to the menu (SPACEBAR)

Tips and Strategies

- Plan your route to avoid cornering yourself, especially in obstacle-heavy maps.
- Prioritize eating nearby food items to minimize risk.
- In Pacman Mode, leverage edge wrapping for efficient navigation.
- Use pauses strategically to plan moves on difficult boards.

Enjoy the game, improve your skills, and aim for the highest record!