

Some sample project ideas...

Breakout / Bricks

Destroy a wall, one brick at a time. A ball bounces between the player's paddle and the wall. When the ball hits a brick, the brick is destroyed. If the ball gets past the paddle, the player loses a life.

Asteroids

The player pilots a spaceship through an asteroid field. If an asteroid hits the spaceship, the player loses a life. The spaceship can shoot at the asteroids to destroy them.

Frogger

In this arcade classic, the player is a frog trying to cross a busy street. If a car hits the frog, the player loses a life.

(Note: the full version of this game includes a section of river that the frog crosses by hopping from log to log. For this project, just the street section is enough.)

Maze (“essence of pac-man”)

Pilot a sprite through a maze to reach a goal. Include a time limit or some other constraint (e.g. ghosts chasing the player) to make the maze more challenging.

Dancing sprite

The player controls a sprite to make it dance to music playing. To make it more challenging, add constraints on the player (e.g. that each dance must contain all moves, or that some moves cannot follow others).

Rock-paper-scissors

A player competes against the computer in rock-paper-scissors.

Who wants to be a millionaire

The computer asks the player multiple-choice questions and awards points for correct answers.

Calculator

Implement a basic calculator. The user inputs a number, selects a function (add, subtract, multiply, or divide), and then inputs a second number. The calculator then calculates and displays the answer.

Automatic art generation

Write a program that generates pretty pictures. The user should be able to have some control over how the picture will look by changing one or more parameters. After the user sets the parameters and hits “go,” the computer will generate an original work of art.