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BrickBreaker:

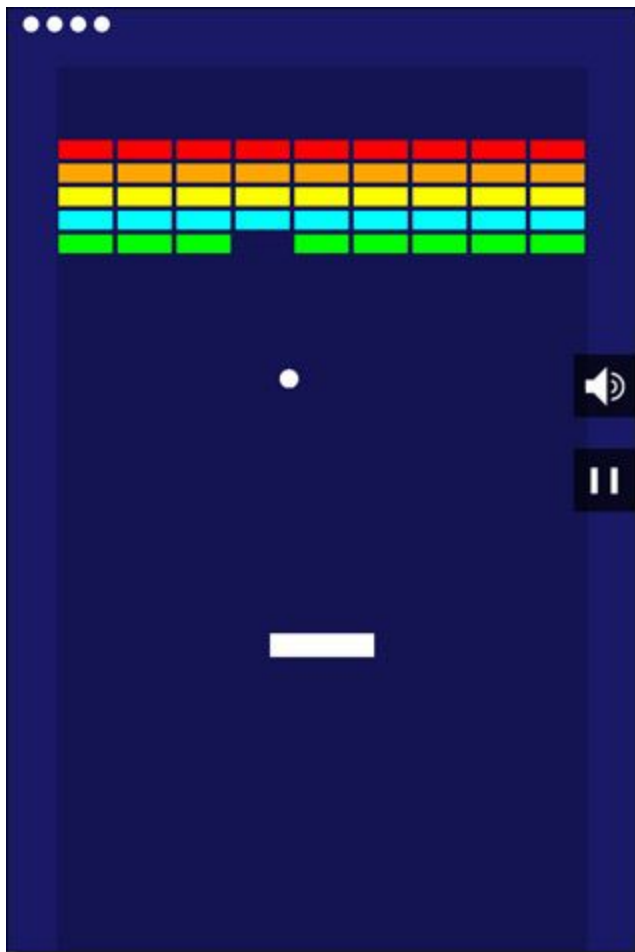
(https://www.youtube.com/watch?v=66m_drUfpKU&ab_channel=Duxy200)

Accessories:

- Joystick
- 1-2 Pushbuttons
- LCD Screen

Main Idea:

You have layers of colored bricks and a tossed up ball with which to break the layers. Controlling the momentum of the ball (usually a white ball) is a paddle which you have to maneuver from side to side. The complexity of the bricklayers and the speed of the ball increases as you go up the difficulty.



Design:

Start Program:

Main Menu (Week 4):

- Play game choice: Loads brick breaker game
- How to Play: Instructions on how to play the game
 - Controls
 - Objective of game

The game: (Weeks 1-3)

- Control a paddle that moves side to side (Week 1)
- Draws combination of bricks (Week 1)
- Ball moves in random direction (Week 2)
- Ball collides with side boundaries and paddle (Week 2)
- If ball falls in lower Boundary
- Game Over screen (Week 3)
 - Option to restart
 - Option to return to menu
- If ball successfully destroys all bricks
- Victory Screen (Week 3)
 - Option to restart
 - Option to return to menu

Milestones:

11/13/17-11/17/17

- Spawns blank screen with bricks
- Bricks vary colour
- Design paddle
- Player controls paddle with joystick
 - Paddle speeds up based on how much joystick is pressed

11/20/17-11/24/17

- Design Ball
- Basic movement physics
 - If ball collides with paddle, ball goes upwards
 - If ball collides with boundaries, ball changes direction
 - If ball collides Bottom boundary, ball disappears and game ends

- If ball collides with bricks, brick disappears

11/27/17-12/1/17

- Display screens
 - Game over screen when ball hits lower boundary
 - Victory screen if ball successfully breaks all bricks

12/3/17

- Start menu:
 - If player chooses “start option”, game begins
 - Instructions option
 - Displays blank screen with message on how to play and controls

Extra Ideas: Ideas that may be added if time allows it:

- Multiple difficulties:
 - Ball speed varies with difficulty
- Score system and displays score when game is over
- Lives system
- Two player mode that requires two LCD screens where players work together to win the game.