

# ECE385 Final Project Proposal

Project Idea: Frogger

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## I. INTRODUCTION

## II. IDEAS AND OVERVIEW

Our idea is to create a "Frogger" game with the basic premise of moving a frog across the street without getting hit by any moving obstacles. This will be accomplished via similar techniques used in lab8 and interfacing VGA graphics with a USB keyboard controller.

A NIOS-II Processor will be used and hardware...

## III. BLOCK DIAGRAM

## IV. LIST OF FEATURES

### *Basic Functionality*

- User controlled block moves according to grid set on VGA display
  - Up, down, left, or right depending on input
- Moving obstacles that are different shapes
  - Different types of objects can lead to different outcomes - i.e. object can either allow "frogger" to move with it or kill it.
- Multiple levels with increasing difficulty
- Starting point and ending point on any given level
- Timer
  - 5 minutes to complete level
- Color
  - Must be able to clearly differentiate between obstacle, user controlled block, and the map
- Score/Highscore

### *Optional Functionality and Complexity*

- Multiple maps
  - Maps taking place with different shaped obstacles and different background

- Sound - 8-bit soundtrack
- Sprites and animations
- Start menu - Options Help Highscores, Start Button
- Powerups:
  - Slow-down/speed-up obstacles
  - Longer blocks for "frogger" to hop onto
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## V. EXPECTED DIFFICULTY

The basic functionality of this game will not be much difficulty at all (1-2 pts). We are relying on implementing a majority of our "Optional Functionality and Complexity" that will give us the bulk of the difficulty points. This project will most likely approach a 5 in terms of difficulty.

## VI. PROPOSED TIMELINE

(RYAN)

## VII. FIGURES

### APPENDIX