

CSEE W4840 Embedded System Final Project Proposal

- **Group member**

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- **Project title**

Super frogger

- **Introduction**

Super frogger is based on DE2 FPGA board with peripherals of PS/2 keyboard and VGA display. The character (frog) should cross the river while avoiding coming crocodiles. Basically there are dual river channels with opposite flow direction. The total time crossing the river is calculated when the frog succeeds; otherwise it will lose its life. More difficult stages would come up after it crosses the previous one to make the game more challenging.

- **Design features**

There will be two channels between start point and the other river band, with opposite directions.

Several crocodiles are coming along the riverside. The frog should try avoiding the crocodiles.

There will be bonus (food) gift in the river for the frog to achieve high score.

The total time and the level of stage will be recorded so that player could have a comparison with previous scores. Also remaining life will be recorded.

If permitted, there could be two players competing at the same time to see who achieves higher score.

- **Milestones**

Milestone 1 - Mar 27

Design and build the whole game map (pixel positions and graphic design).

Construct different models in the game (frog, river, crocodiles, and other decorations)

Milestone 2 – Apr 10

Work on and implement the character behavior with keyboard and VGA display hardware configuration.

Achieve level difficulty changing function with software.

Record and configure the current score in DE2 board with software.

Milestone 3 - Apr 24

Finish final coding and hardware/software configuration.

Testing and debugging the game.

- **Future goals**

If time permits, we could construct a two player competing mode to make the game more fun.