

Pelmanism

Embedded System Design
(CSEE 4840)

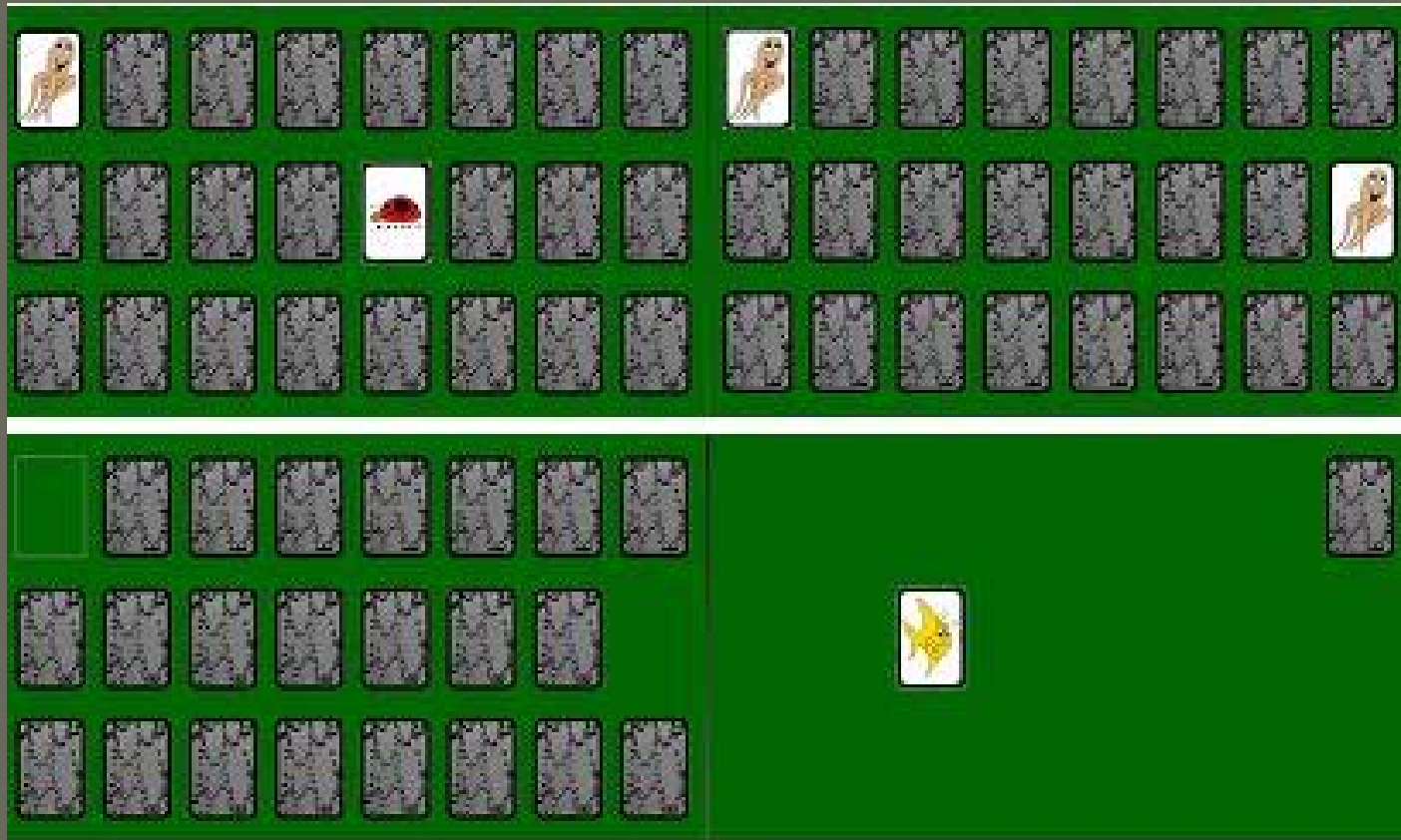
Can Ilhan
Chintan Shah
Sungjun Kim
Zenan Li

Overview

- Project Overview
- Architecture
- Experiences and Issues
- Lessons Learnt

Project Overview

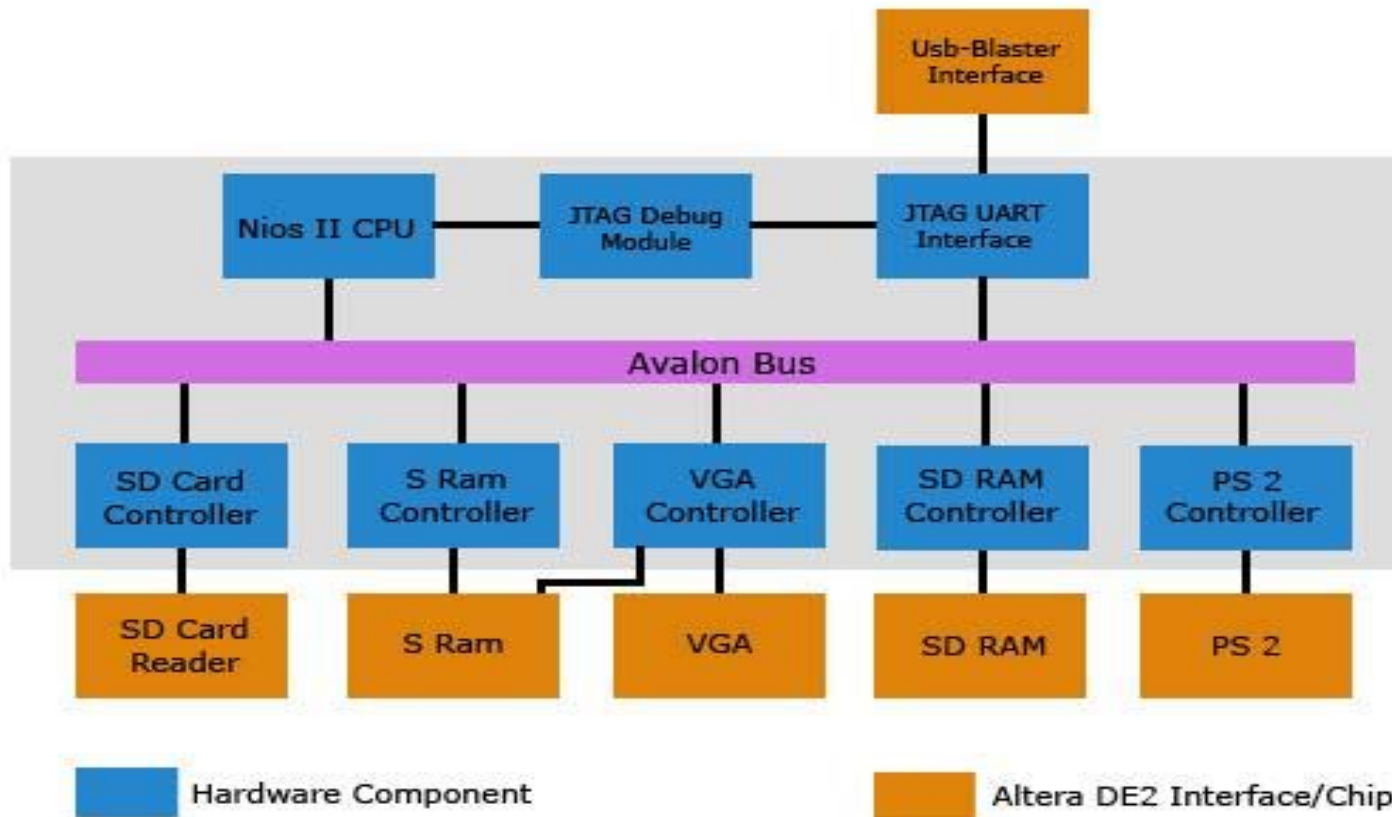
- Game definition.



Project Overview

- ◉ Eight pairs.
- ◉ Pictures read from the SD card.
- ◉ SD card uses FAT file system.
- ◉ Pictures in JPEG format.
- ◉ Decoded pictures saved in the SRAM.
- ◉ VGA controller reads from SRAM.
- ◉ Code stored in SDRAM.
- ◉ Animation in hardware.

Hardware Architecture



Software Architecture

Application Layer

Game Logic

API

File System

I/O

Jpeg Decoder

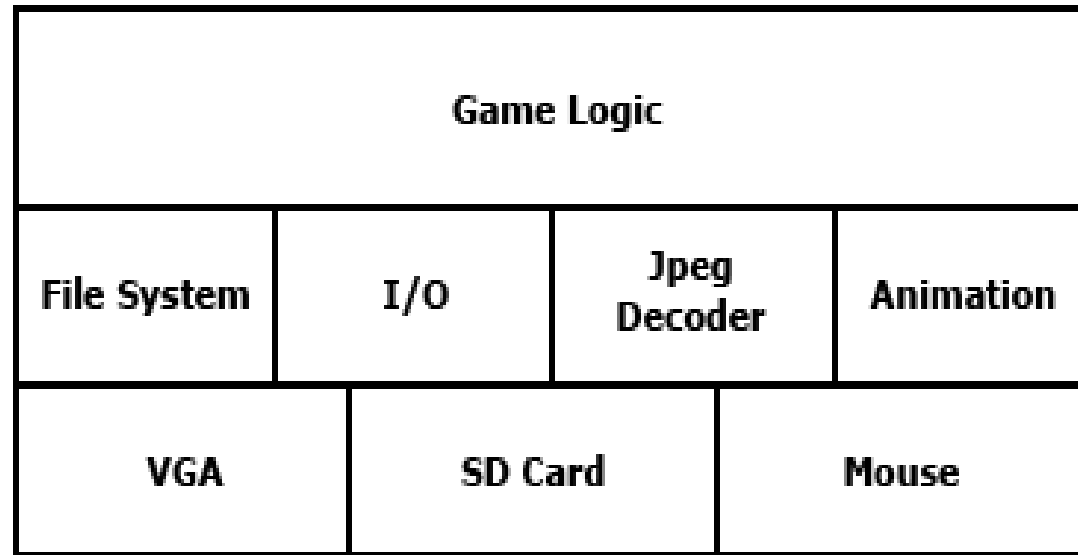
Animation

Driver Layer

VGA

SD Card

Mouse



Experiences & Issues

- Mouse- Streaming mode/Remote mode.
- Writing to SRAM.
- White stripes on pictures.
- Animation.

Lessons Learnt

- Project planning
- Understanding each others ideas.
- Defining clear interfaces.
- Be more careful in writing VHDL code.
- Have patience.