

EECS 314 - Project Report

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1 Problem Statement

While learning MIPS in EECS 314, our group noticed a lack of fun, interactive tools to make learning MIPS easier. There are helpful demonstrations in the textbook and you can always open up QtSpim and play around, but there wasn't anything particularly graphical and interactive to help people learn MIPS. Our group wanted to put together an Android app to make the process of learning MIPS easier. The tool we settled on to build this was Unity, a cross-platform game engine which several of us had used before which made game development easy.

2 Major Challenges

There were a couple of challenges we ran up against while developing this set of games.

1. Item 1
- 2.

3 Key Components

Our project has three key components which come together to make the MIPS learning process easier. We have the MIPS Learner, which is a graphical MIPS simulator in the style of ALICE for Java, we have MIPS Bejeweled, a twist on the classic Bejeweled game which helps teach people how MIPS instructions work, and we have the Pipeline Bakery which presents the MIPS pipeline in a fun, graphical way.

3.1 MIPS Learner

3.2 MIPS Bejeweled

3.3 Pipeline Bakery

4 Integration

5 User Interface

6 Snapshots

7 Individual Contributions

- Haley Eisenshtadt
Pipeline Bakery Design/Implementation
- Jason Kuster
Bejeweled Block Physics
Project Report Lead
Project Report Compilation
- Ian Lavelle
Bejeweled Base Implementation
Bejeweled Instruction Logic
- Joe Satterfield
MIPS Learner Implementation
- James Wright
MIPS Learner Implementation