# Overview of Puzzler
## Software Engineering COMP 4110
## University of Massachusetts Lowell
## Fall 2025

## Team members:

Project Coordinator: Chris Peters

Project Developer:  Max Fitzgerald

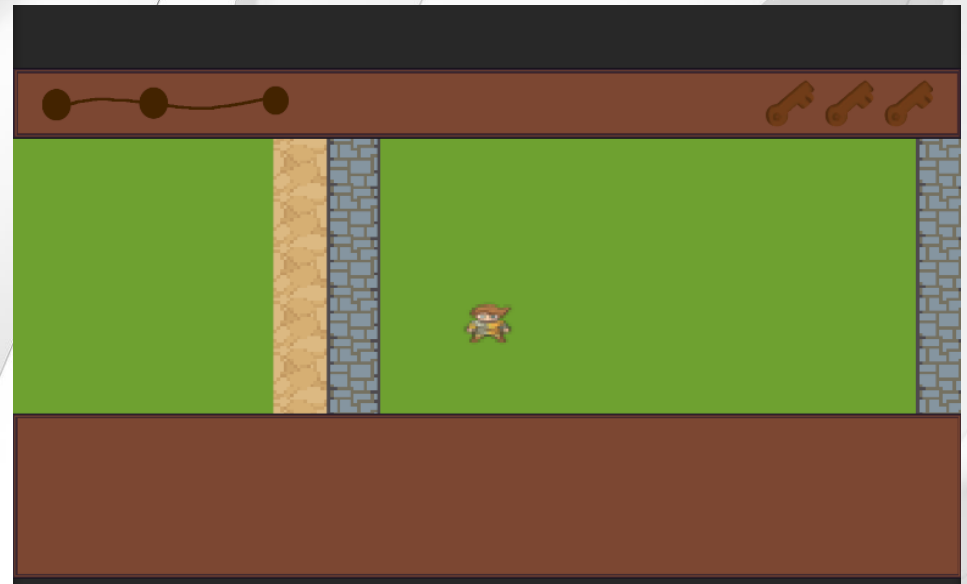Project Developer: Shkamb Tafarshiku

Project Developer: Elijah Miles

Project Developer: Ebenezer Oloyede

## Instructor: Dr. James Daly

# Puzzler

-Fill-in-the-blank puzzles

-Make learning fun and accessible

-Lack of engaging educational tools

-Better learning outcomes

-Unity, C#

-User input

-Tile Map system

-PlayerMovement

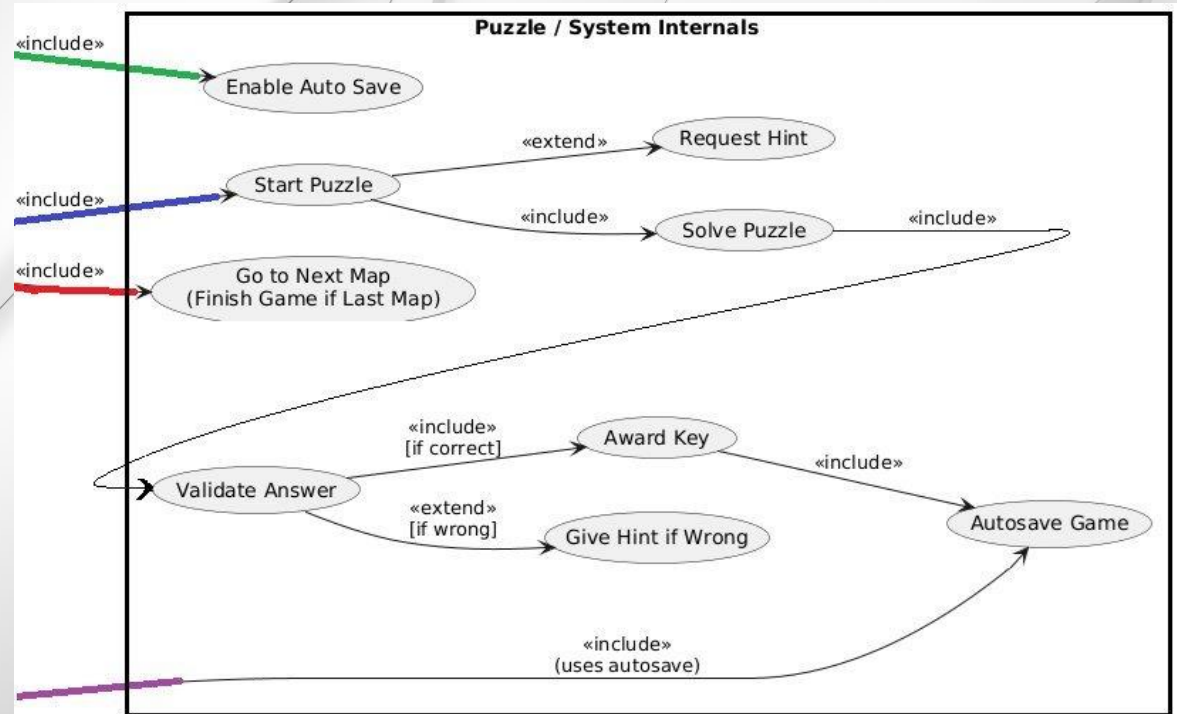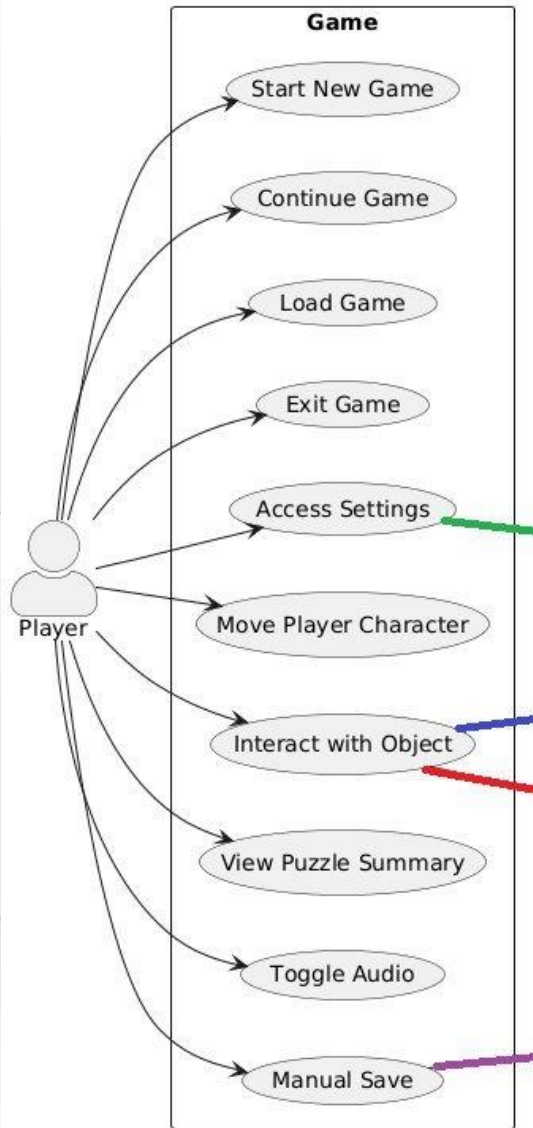-PuzzleController

# Overview of Features

- 6 interactive puzzles (Math, Science, History)
- 2 themed maps with player navigation
- Dynamic hint system (tiered after attempts)
- HUD with real-time progress indicators
- Save/load system with auto-save
- Standards-aligned to Mass DOE grade 7

# Domain Research

- Researched how educational games teach through short repeatable challenges.
- Studied effective feedback systems.
- Researched 7th-grade Math, English, and Life Science standards to design accurate, age-appropriate puzzles

- Project Constraints
  - Game must run offline on standard classroom computers
  - All text must be written at or below a 7th-grade reading level
  - Puzzles must be solvable in under ~1 minute to support repeat attempts

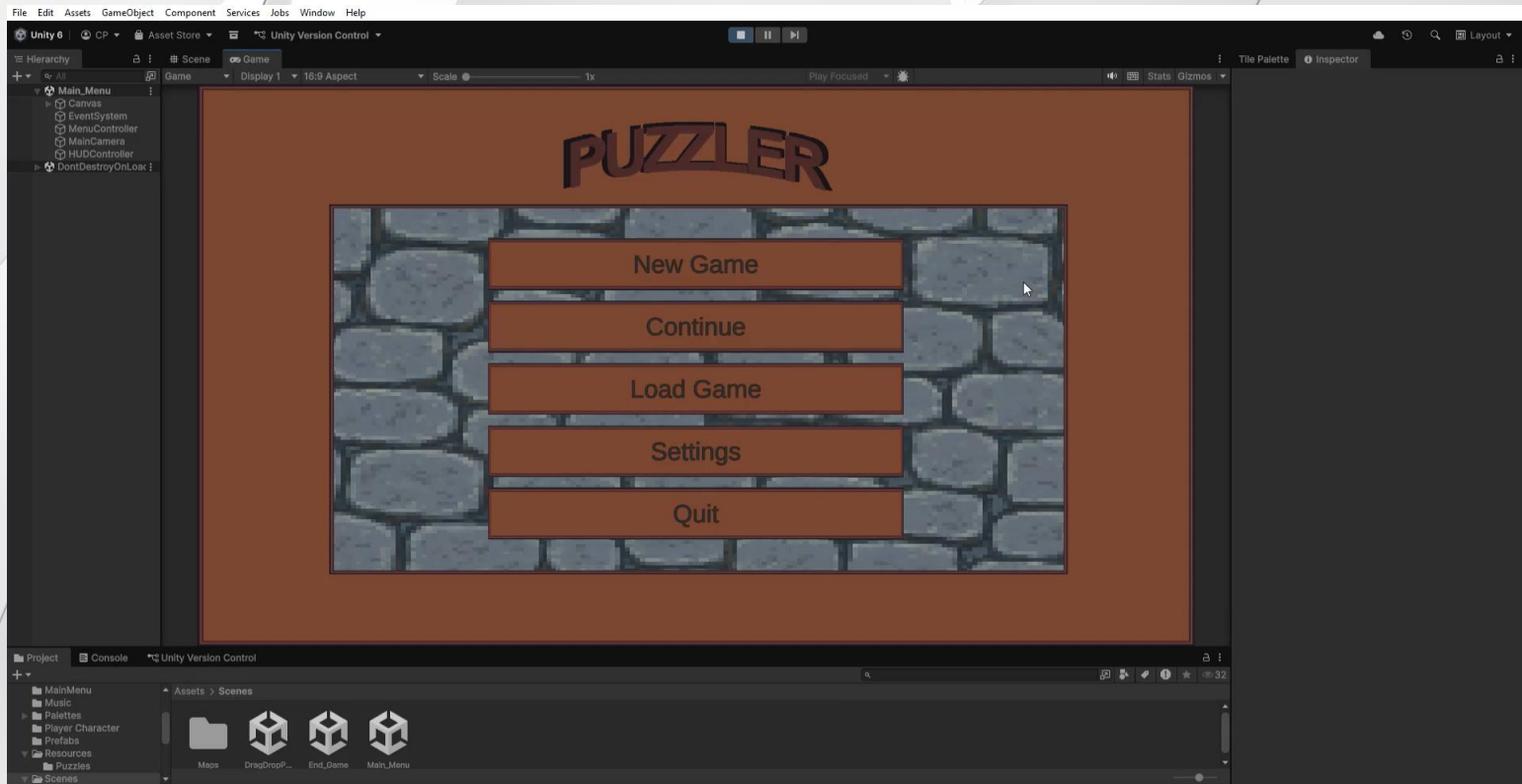# Part II: Model-based View of System

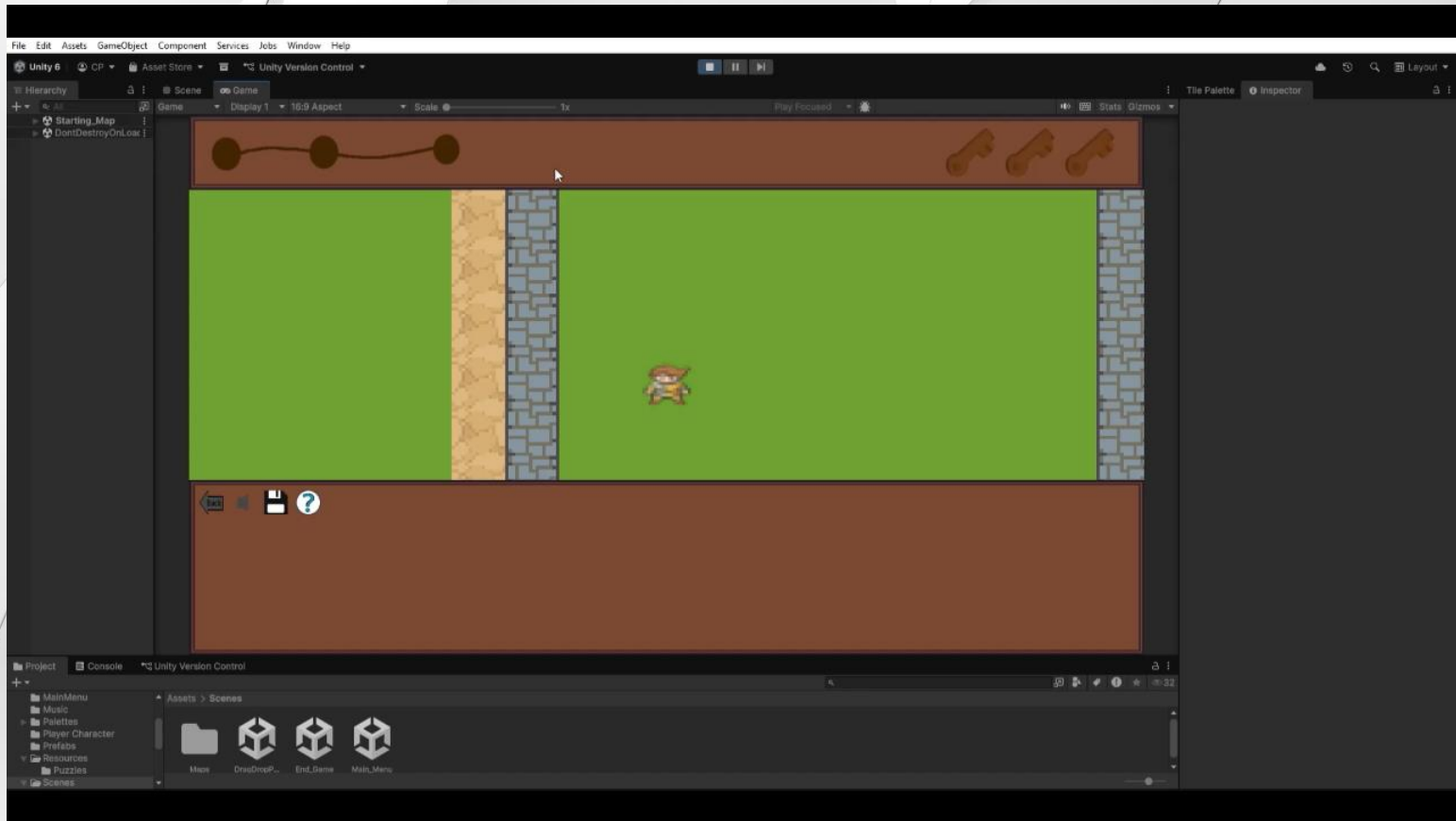**Key Use Cases**: Start New Game, Interact with Object, Manual Save

# Part III: Demonstration

- 1 – Introduction
- 2 – Completing a puzzle
- 3 – Completing a map
- 4 – Saving
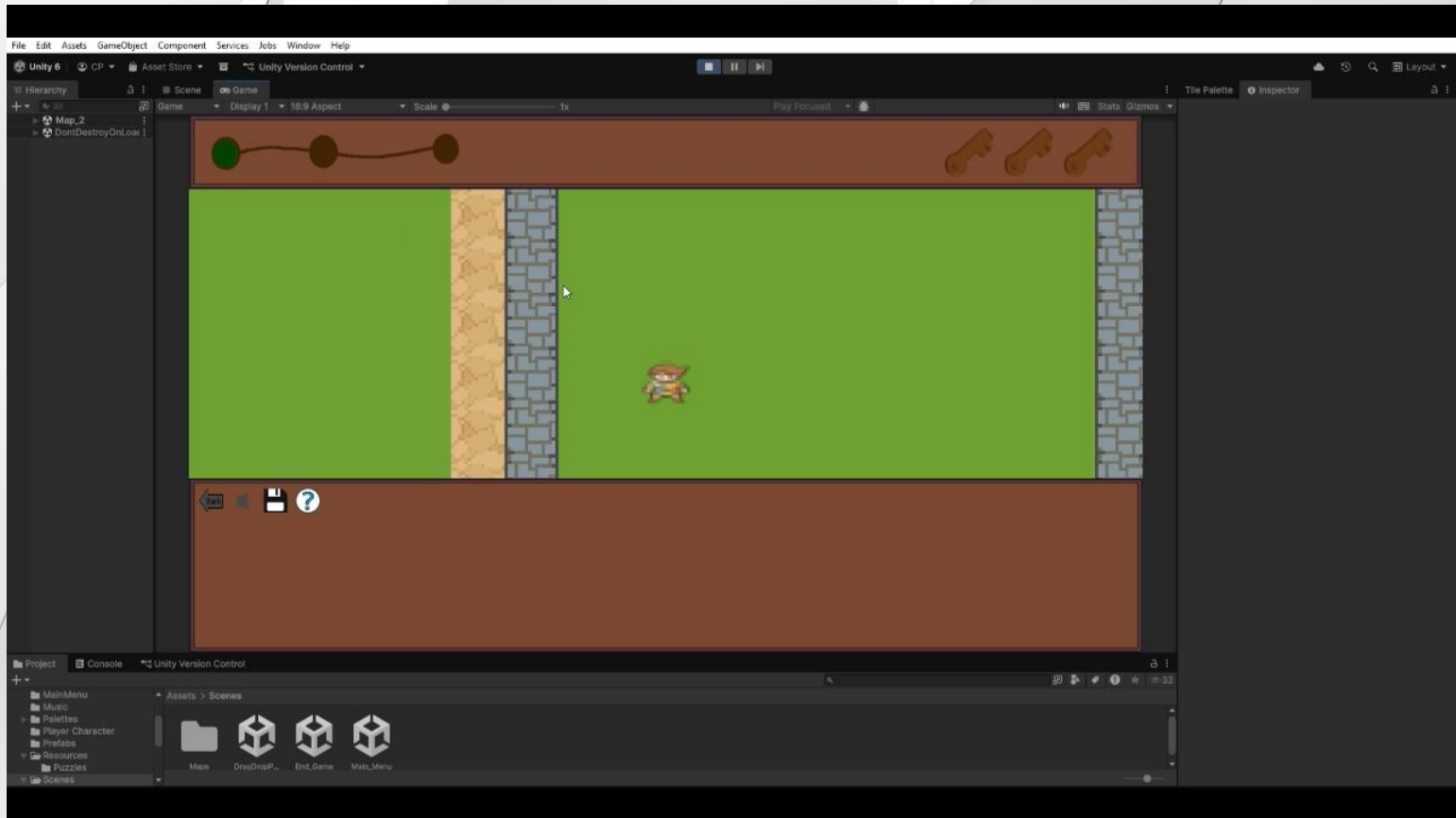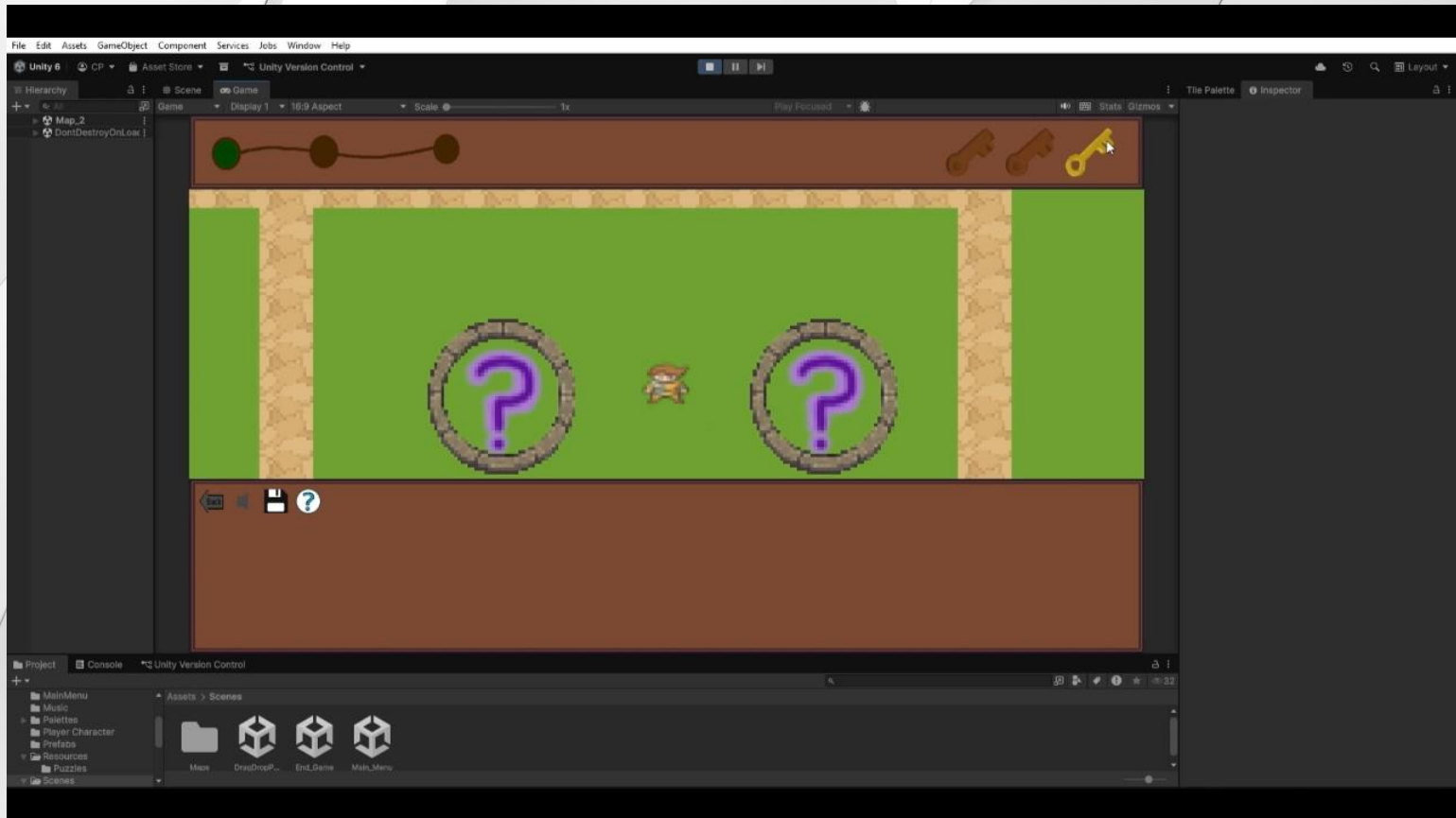- 5 – Completing the game

# 1 - Introduction

# 2- Completing a puzzle

# 3 – Completing a map

# 4 - Saving

# 5 – Completing the game

# **Acknowledgements**

- We gratefully acknowledge and appreciate the participation of our customer the Massachusetts Department of Education.