

MICHIGAN STATE

U N I V E R S I T Y

Project Plan Game of Loans

The Capstone Experience

Team Quicken Loans

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*From Students...
...to Professionals*

Functional Specifications

- Gamification of the loan process.
- Educate users on the process of attaining and closing a property loan.
- Provide Quicken Loans team members a way to compete and learn at the same time.



Design Specifications

- Opportunity Knocks
 - The player draws cards to raise their statistics.
- Property Hunt
 - The player picks a property to begin the loan process on.
- Loan in Process
 - The player progresses their currently selected loan by rolling the dice.



Screen Mockup: Main Menu

Quicken Loans presents
Game of Loans

Play

How to Play

Leaderboards

Credits



Screen Mockup: Home Screen

Score: 12,500

Income: \$68,250

Assets: \$22,550

Credit: 725

Turns Left: 32

Opportunity Knocks

Property Hunt

Loan in Process



Screen Mockup: Opportunity Knocks

Score: 12,500

Income: \$68,250

Assets: \$22,550

Credit: 725

Turns Left: 32

Home

Asset Card

Image

Wealthy relative passes away leaving you an inheritance, increase Assets by \$12,000

Draw Card



Screen Mockup: Property Hunt

Score: 12,500

Income: \$68,250

Assets: \$22,550

Credit: 725

Turns Left: 32

Home

237 Spatan Ave
East Lansing, MI 48823

Image

\$115,000

Beds: 3 **Square Feet:** 970 ft
Baths: 2 **Lot Square Feet:** 1,235 ft
Type: Single Family Home
Difficulty: Easy
Combined Roll Value to Close: 14

Select Property 1

320 M.A.C. Ave
East Lansing, MI 48823

Image

\$242,000

Beds: 5 **Square Feet:** 2,225 ft
Baths: 4 **Lot Square Feet:** 3,840 ft
Type: Single Family Home
Difficulty: Medium
Combined Roll Value to Close: 32

Select Property 2



Screen Mockup: Loan in Progress

Score: 12,500

Income: \$68,250

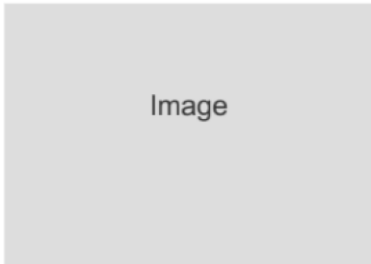
Assets: \$22,550

Credit: 725

Turns Left: 32

Home

237 Spatan Ave
East Lansing, MI 48823



\$115,000

Beds: 3 **Square Feet:** 970 ft

Baths: 2 **Lot Square Feet:** 1,235 ft

Type: Single Family Home

Difficulty: Easy

Combined Roll Value to Close: 14

Roll Dice

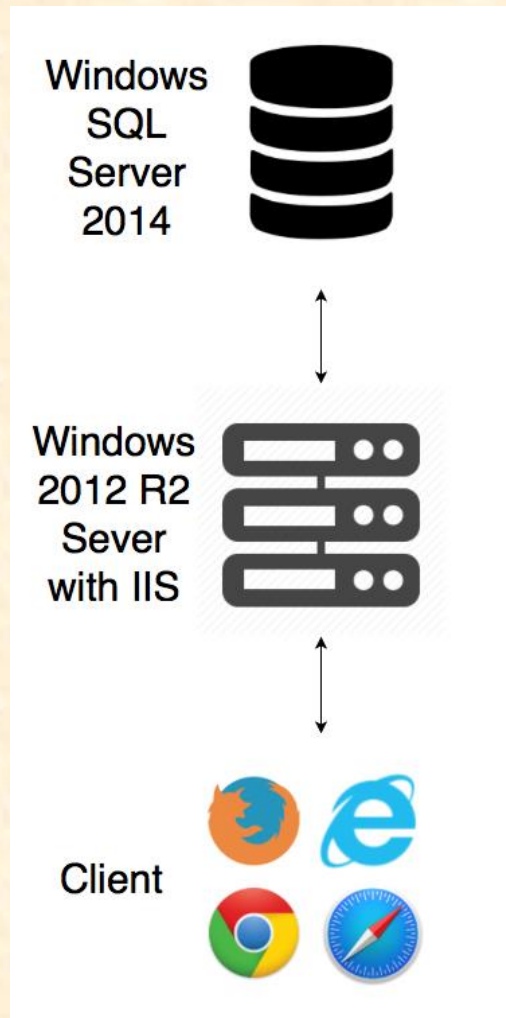


Technical Specifications

- Game Controller: Handles all game logic.
- Navigation Controller: Handles button events.
- Player: Holds all player statistics, current properties, opportunity knocks cards, etc.
- Opportunity Knocks Card: Contains relevant statistic data for each card.
- Property Card: Contains relevant property data for each card.



System Architecture



System Components

- Hardware Platforms
 - PowerEdge R210 Server
 - A user's laptop or desktop machine
- Software Platforms / Technologies
 - Unity 5.3
 - Language: C#
 - WebGL build target
 - Microsoft SQL Server 2014



Testing

- Unit testing.
- Integration testing
- Using Visual Studio Test Framework
- Game balancing for testing proper difficulty



Risks

- Feature creep
 - Mitigation: Implement core features first.
- Unity Development
 - Mitigation: Continuous learning through documentation and tutorials.
- Animation and graphics
 - Mitigation: Assign enough time to complete tasks for creating and improving graphics and animations.
- Using Unity with GitHub repository
 - Mitigation: System put in place so no two team members are working in the same scene at the same time.

