

# Project Eris

## Test Results

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## 1 Test Directions

### 1.1 Unit Testing

We are using Qt's testing package to test our core data and class structures. Since our first milestone, we have written new test code every time we program a new data structure or function. Thus, each and every code are tested immediately after any changes.

### 1.2 Integration Testing

For every change that we make to the code, we will test this on the current GUI to confirm that it has the desired effect. For this to work well, we need to document our expectations for code changes. After we sufficiently document our expectations, we will test the product as a whole to make sure everything works properly. If an unexpected error occurs any time during the procedure, the code will have to be revised.

### 1.3 User Acceptance Testing

To confirm from users that our game is both playable and intuitive, we will be asking a number of volunteers to play with our program. Our test group will mainly consist of RPI students of various degrees, although many will be computer science majors. The test will be conducted in the following fashion:

1. The user will be provided with the rules and any other information necessary to play the game.
2. The user will play as many games as they like.
3. During the process, record the results for the recording sheet (see Test Results).
4. Once the user finishes the game, we will get the user's feedback and record their opinions on the application.

## 2 Test Results

### 2.1 Unit Testing

```
***** Start testing of TestMatrix *****
Config: Using QTest library 4.4.0, Qt 4.4.0
PASS   : TestMatrix::initTestCase()
PASS   : TestMatrix::swap()
PASS   : TestMatrix::width()
PASS   : TestMatrix::height()
PASS   : TestMatrix::at()
PASS   : TestMatrix::opequal()
PASS   : TestMatrix::opnoteq()
```

```

PASS      : TestMatrix::cleanupTestCase()
Totals: 8 passed, 0 failed, 0 skipped
***** Finished testing of TestMatrix *****

***** Start testing of TestSquareGridBoard *****
Config: Using QTest library 4.4.0, Qt 4.4.0
PASS      : TestSquareGridBoard::initTestCase()
PASS      : TestSquareGridBoard::vertex_neighbors()
PASS      : TestSquareGridBoard::edge_neighbors()
PASS      : TestSquareGridBoard::has_index()
PASS      : TestSquareGridBoard::cleanupTestCase()
Totals: 5 passed, 0 failed, 0 skipped
***** Finished testing of TestSquareGridBoard *****

***** Start testing of TestSquarePiece *****
Config: Using QTest library 4.4.0, Qt 4.4.0
PASS      : TestSquarePiece::initTestCase()
PASS      : TestSquarePiece::flip_vertical()
PASS      : TestSquarePiece::flip_horizontal()
PASS      : TestSquarePiece::flip_combined()
PASS      : TestSquarePiece::flip_combined_simultaneous()
PASS      : TestSquarePiece::rotate_clockwise()
PASS      : TestSquarePiece::rotate_counterclockwise()
PASS      : TestSquarePiece::rotate_twist_1()
PASS      : TestSquarePiece::rotate_twist_2()
PASS      : TestSquarePiece::flip_and_rotate_clockwise()
PASS      : TestSquarePiece::flip_and_rotate_counterclockwise()
PASS      : TestSquarePiece::generate_set_1()
PASS      : TestSquarePiece::generate_set_2()
PASS      : TestSquarePiece::generate_set_3()
PASS      : TestSquarePiece::generate_set_4()
PASS      : TestSquarePiece::generate_set_5()
PASS      : TestSquarePiece::generate_set_6()
PASS      : TestSquarePiece::opequal()
PASS      : TestSquarePiece::opnoteq()
PASS      : TestSquarePiece::cleanupTestCase()
Totals: 20 passed, 0 failed, 0 skipped
***** Finished testing of TestSquarePiece *****

```

## 2.2 Integration Testing

- Piece appear on tray: *Pass*
- Player turn is indicated: *Pass*
- Piece rotate correctly: *Pass*
- Piece flip correctly: *Pass*
- Piece indicate valid moves: *Pass*
- Piece can be placed on board: *Pass*
- Piece can not be placed at invalid space: *Pass*
- Piece returns to tray when no longer in focus: *Pass*
- Artwork are rendered correctly: *Pass*

## 2.3 User Acceptance Testing

Test Description	Pass or Fail
Are the following controls acceptable?	
Move piece	<i>Pass</i>
Place piece	<i>Pass</i>
Rotate piece	<i>Pass</i>
Flip piece	<i>Pass</i>
Are the following GUI design decisions intuitive?	
Board	<i>Pass</i>
Piece	<i>Pass</i>
Piece Tray	<i>Fail</i>
Are the following notifications understandable?	
Player's turn	<i>Fail</i>
Valid move	<i>Pass</i>
Invalid move	<i>Pass</i>
Win condition	<i>Fail</i>
Lose condition	<i>Fail</i>
Are the rules comprehensible?	<i>Pass</i>
Are you satisfied with the game?	<i>Fail</i>

Table 1: User Acceptance: Ken Omiya

Test Description	Pass or Fail
Are the following controls acceptable?	
Move piece	<i>Pass</i>
Place piece	<i>Fail</i>
Rotate piece	<i>Pass</i>
Flip piece	<i>Pass</i>
Are the following GUI design decisions intuitive?	
Board	<i>Pass</i>
Piece	<i>Pass</i>
Piece Tray	<i>Fail</i>
Are the following notifications understandable?	
Player's turn	<i>Fail</i>
Valid move	<i>Pass</i>
Invalid move	<i>Pass</i>
Win condition	<i>Fail</i>
Lose condition	<i>Fail</i>
Are the rules comprehensible?	<i>Pass</i>
Are you satisfied with the game?	<i>Fail</i>

Table 2: User Acceptance: Hana Omiya

Test Description	Pass or Fail
Are the following controls acceptable?	
Move piece	<i>Pass</i>
Place piece	<i>Fail</i>
Rotate piece	<i>Fail</i>
Flip piece	<i>Fail</i>
Are the following GUI design decisions intuitive?	
Board	<i>Pass</i>
Piece	<i>Pass</i>
Piece Tray	<i>Fail</i>
Are the following notifications understandable?	
Player's turn	<i>Fail</i>
Valid move	<i>Pass</i>
Invalid move	<i>Fail</i>
Win condition	<i>Fail</i>
Lose condition	<i>Fail</i>
Are the rules comprehensible?	<i>Pass</i>
Are you satisfied with the game?	<i>Fail</i>

Table 3: User Acceptance: Mari Omiya

Test Description	Pass or Fail
Are the following controls acceptable?	
Move piece	<i>Pass</i>
Place piece	<i>Pass</i>
Rotate piece	<i>Fail</i>
Flip piece	<i>Fail</i>
Are the following GUI design decisions intuitive?	
Board	<i>Pass</i>
Piece	<i>Pass</i>
Piece Tray	<i>Fail</i>
Are the following notifications understandable?	
Player's turn	<i>Fail</i>
Valid move	<i>Pass</i>
Invalid move	<i>Fail</i>
Win condition	<i>Fail</i>
Lose condition	<i>Fail</i>
Are the rules comprehensible?	<i>Fail</i>
Are you satisfied with the game?	<i>Fail</i>

Table 4: User Acceptance: Susumu Omiya