

# Manual Testing

We are unable to mock GUI elements, so they must be tested manually. The actions that some of these tests perform can be tested in code, but these check that the GUI labels/buttons function as they should.

## Title screen

- Launch the game, which will load the title screen
- Press the options button to enter the settings menu
- Change any setting, then press back
- Press the options button to enter the settings menu, verify the setting is still as you set it
- Press Play to enter the map screen.

## Detailed building count label

- Hover over the building count label at the top left of the map screen
- Verify that the combined and individual building counts are correct

## Detailed currency label

- Hover over the currency label at the top of the map screen
- Verify that the amount of money, and currency generated per second values are correct:
  - Each Accommodation, Sports Centre and Football Field building generates £10/second
  - Each Food Court building generates £20/second
  - Each Lecture Hall building loses £10/second

## Pause the game

- Press the play/pause button in the top right corner of the screen
- Check that the pause button is replaced with a play button
- Verify that the game is paused:
  - Any recently placed buildings have stopped being built
  - No events occur while the game is paused
  - The timer in the top left corner should not change
  - You cannot place, move and delete buildings

## Resume the game

- Press the play/pause button in the top right corner of the screen, while the game is paused
- Check that the play button is replaced with a pause button
- Verify that the game has been resumed:
  - Any recently placed buildings will resume being built
  - Events will be scheduled again
  - The timer in the top left corner will change
  - You can place, move and delete buildings

### Place a building

- Press on any of the 5 building buttons at the bottom of the screen
- Hover over any space on the screen and left click to place a building.
- Verify that you cannot place a building over obstacles, and the placement feedback grid shows that by turning into red crosses.
- Once a building has been placed, verify that it starts at  $\frac{1}{4}$  of its final size, and doubles in size every second for 3 seconds until it becomes its final size.
- Check that the building counter and satisfaction score have been updated

### Move a building

- Place a building, wait for it to be built
- Click and drag that building to any other allowable building location
- Check that the building has been removed from its original location and appeared at the new location
- Check that the building counter has not changed
- Check that the satisfaction score has changed

### Delete a building

- Place a building, wait for it to be built
- Right click on that building for it to be deleted
- Check that the building counter has been decremented
- Check that the satisfaction score has been changed

### Event popup menus (Unethical Investors, Event Nights and Freshers' Week events)

- Wait until the end of September (in game) or until a random event with a popup is scheduled.
- Verify that while a popup is open:
  - The game is paused
  - You cannot press the play/pause button
  - You cannot place, move and delete building
  - No other events begin or end
- Select an option on the popup
- Check that the satisfaction score has changed
- Check that the game has resumed

### Achievements

- Check that you get an achievement when you:
  - Place 30 buildings
  - Maintain a positive satisfaction score for 3 minutes
  - Reach £10,000

### Time runs out

Check that once you reach the end of year 3, the map screen is replaced by the game over screen, and the leaderboard is displayed on the left (will be blank if no leaderboard entries exist).

### Submit leaderboard score

- Enter your username into the username box on the right side of the game over screen.
- Press enter
- Verify that the username box is removed and replaced with a label to tell you that your score has been submitted

#### Leaderboard scores

Check that the leaderboard displays the top 5 scores, in numerical order.

#### Leaderboard updates

Check that once you have submitted a leaderboard score, it will appear at the end of the next play-through.

#### Game restarting

On the game over screen, press “Try again” to reset the game.

Verify that these tests pass on this new game, to ensure that there are no remnants of the previous game.

#### Quit game

On the title screen and game over screen, press “Quit”

Check that the game closes