

Airport Terminal Security Checkpoint Simulator Black Box Test Plan

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Introduction

This test plan should test the boundary cases and error handling for when the simulator is given unexpected values. The application is begun by selecting Simulation Runner, run as java application; then the sliders are used to govern input and the desired number and percentages of passengers is entered and the "Start" button is selected.

Test ID	Description	Expected Results	Actual Results
Test 1: Testing valid inputs in middle range (William Mitchell)	Preconditions: None Run: Simulation Runner Enter: 500 for number of passengers; Select: 8 for # Security Checkpoints; Enter: 10 for % Trusted Travelers Enter: 30 for % Fast Track Passengers Enter: 60 for % Ordinary Passengers Animation speed to Fast select Start	Expected results are: Passengers: 500 Checkpoints: 8 Average Wait Time: 24.78 minutes Average Process Time: 1.91 minutes	(FAIL) Actual results are: Passengers: 500 Checkpoints: 8 Average Wait Time: 5.03 minutes Average Process Time: 1.91 minutes
Test 2: Testing boundary inputs for number of checkpoints (William Mitchell)	Preconditions: None Run: Simulation Runner Enter: 10 for number of passengers; Select: 3 for # Security Checkpoints; Enter: 10 for % Trusted Travelers Enter: 30 for % Fast Track Passengers Enter: 60 for % Ordinary Passengers Animation speed to Fast select Start	Expected results are: Passengers: 10 Checkpoints: 3 Average Wait Time: 2.82 minutes Average Process Time: 1.97 minutes	Actual results are: Passengers: 10 Checkpoints: 3 Average Wait Time: 2.82 minutes Average Process Time: 1.97 minutes
Test 3: Testing incorrect inputs for number of passengers (William Mitchell)	Preconditions: None Run: Simulation Runner Enter: -1 for number of passengers; Select: 3 for # Security Checkpoints; Enter: 10 for % Trusted Travelers Enter: 30 for % Fast Track Passengers Enter: 60 for % Ordinary Passengers Animation speed to Fast select Start	An alert box should appear titled: "Simulation Initialization Error" with the text "There must be at least one passenger."	An alert box should appear titled: "Simulation Initialization Error" with the text "There must be at least one passenger."

Test 4: Testing incorrect inputs for number of Checkpoints (William Mitchell)	Preconditions: None Run: Simulation Runner Enter: 10 for number of passengers; Select: 1 for # Security Checkpoints; Enter: 10 for % Trusted Travelers Enter: 30 for % Fast Track Passengers Enter: 60 for % Ordinary Passengers Animation speed to Fast select Start	An alert box should appear titled: "Simulation Initialization Error" with the text "Number of checkpoints must be at least 3 and at most 17."	An alert box should appear titled: "Simulation Initialization Error" with the text "Number of checkpoints must be at least 3 and at most 17."
Test 5: Testing incorrect inputs for percentages of passenger types (William Mitchell)	Preconditions: None Run: Simulation Runner Enter: 10 for number of passengers; Select: 3 for # Security Checkpoints; Enter: 5 for % Trusted Travelers Enter: 30 for % Fast Track Passengers Enter: 60 for % Ordinary Passengers Animation speed to Fast select Start	An alert box should appear titled: "Simulation Initialization Error" with the text "Percents must sum to 100."	An alert box should appear titled: "Simulation Initialization Error" with the text "Percents must sum to 100."

Document Revision History

Date	Author	Change Description
10/04/18	William	<ul style="list-style-type: none"> Created black box tests 1-5
10/21/18	William	<ul style="list-style-type: none"> Edited old BBT to reflect changes in course materials and added results of my simulation run