**San Jose State University**

**Computer Engineering Department**

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**CMPE 287 - Software Quality Assurance**

**REGRESSION TEST DESIGN SPECIFICATION DOCUMENT**

**Project – Elevator System**

**Instructor:**

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**Test Design work division:**

|  |  |  |
| --- | --- | --- |
| **S.NO** | **Name** | **Work done in Test Design** |
| **1.** | **Deepshikha Koul** | * Test Project Overview & Background * Black-Box Component Retest Models, Methods and Criteria * Decision Table black box testing for internal alarm component in user panel * Equivalence Partitioning black box testing for internal alarm component in user panel |
| **2.** | **Bindiya Thomas** | * White Box Component Retest Models, Methods and Criteria * State Based Testing for Alarm Component-White Box Testing * Branch Based Testing for Algorithm Component-White Box Testing * Equivalence Partitioning for Algorithm Component * Decision Table for System Level Testing |
| **3.** | **Snigdha Gulhati** | * Equivalence partitioning for System Testing. * Decision Table based testing for Algorithm component black box testing. * Regression Test Case Summary, Distribution, and Classification * Component and System Function Re-Test Models, Methods, and Criteria |
| **4.** | **Nimma Hemanth** | * Document Scope and Structure * Equivalence partition for User Panel Component * Equivalence partition for Floor Panel Component * Decision Table for System Level Testing |

# Chapter #1: INTRODUCTION

## TEST PROJECT OVERVIEW

The IEEE defines Software Testing as an important phase in SDLC life cycle , **s**oftware process based on well-defined software quality control and testing standards, testing methods, strategy, test criteria, and tools.

The main objective of the Software testing is to find as many errors as possible, validate software quality and match the software with the requirement specifications. It is considered to be the last checking point in the process of software delivery. Software testing has many phases like test planning, test requirements, test design , test execution , problem analysis and report, test review and test automation. This document covers the software test design phase for Elevator System project that involves generation of high quality test cases which can be executed to uncover as many errors as possible.

Black box and White box testing methods have been utilized so that effective testing can been accomplished. In Black Box testing, we have chosen decision table and equivalence partitioning. In white box testing, we have selected state based model and branch based model to perform the testing.

The scope of the test design document is to understand how testing is performed on the chosen components of our Elevator Project. The structure of the document starts with an overview of the project; it is followed by the regression test models, methods and criteria: which are segregated further as White-box Regression test design, Black-box Regression test design ad System Function Test Design. This chapter deals with the strategies opted for testing and the goals of testing. Then the test cases are written for these components using the testing methods and the test coverage is also defined. Component regression test design section is followed by the System function test designs. The last chapter involves Regression Test Case Summary , Distribution and Classification.

## Background

The elevator system project has been developed further to incorporate the following features:

1. **Alarm:** Introduction of this component involves addition of Alarm buttons ( ONALARM , OFFALARM ) inside the user panel. The OFFALARM button is deactivated till the time ONALARM button is not pressed.

Once the ONALARM button is pressed

* Color of the ONALARM button changes from GREEN to RED,
* OFFALARM button is activated
* User-Panel floor number buttons ( 1 to max floor number) are deactivated
* Car come to a stop and the car status is changed to " ALARM\_PRESSED "
* External alarm representation is activated which involves changing the "CAR ACTIVE " alarm status on Floor panel to "CAR STUCK" for the respective car along with the change of color from Green to Red.

Once the OFFALARM button is pressed

* Color of the ONALARM button changes from RED to GREEN
* OFFALARM button is de-activated
* User-Panel floor number buttons ( 1 to max floor number) are activated to original state
* Car status is changed to " IDLE"
* External alarm representation is changed from "CAR STUCK" alarm status to "CAR ACTIVE " on Floor panel for the respective car along with the change of color from RED to GREEN.

1. **Algorithm Component:**

A new algorithm was introduced to the current list of algorithms in the Elevator system. This new Algorithm is LRU ( Least Recently Used ) algorithm which selects the least recently used car from the car queue when elevator request pressed.

## Scope of Document

The various components that have been tested for our enhanced elevator system are Alarm component, User panel, Floor panel and Algorithm. Both white box and black box testing methods are performed on the chosen components. The following testing models and methods are used for generating test cases for the chosen components:

White Box Regression Testing – Component testing

* + State-based Testing
    - Alarm
  + Branch Based Testing
    - Algorithm

Black Box Regression Testing – Component testing

* + Equivalence Partition Testing
    - Internal Alarm Component in User Panel
    - External Alarm Component on Floor Panel
    - Algorithm
  + Decision Table testing
    - Internal Alarm Component in User Panel
    - External Alarm Component on Floor Panel
    - Algorithm

System function test designs includes the below models and methods for generating test cases:

* Black Box Regression Testing – System Testing
  + Equivalence partitioning
  + Decision table testing

## Change Analysis

The components that already existed in the elevator system were -

* User Panel
* User Panel Queue
* Floor Panel
* Floor Panel Queue
* Door
* Door Panel
* Car
* Car Controller
* Algorithm
* Meta Controller
* Admin Console

In this version of the elevator system, two new features have been introduced –

* Alarm – This consists of the Internal Alarm as well as the External Alarm
* Least Recently Used Algorithm – This is a new algorithm which has been added for car movement.

***New and Modified Components –***

Based on the Changes Notes provided by the development team, the changes made in this version of the elevator system are as follows –

**Alarm Feature:**

New components are -

1. Alarm -

AlarmConfiguration.java

AlarmFactory.java

Modified components are -

1. AdminConsole -

Gui.java

GuiConfiguration.java

ElevatorConfigurationReader.java

1. Car -

Car.java

ICar.java

CarStatus.java

1. FloorPanel -

FloorPanel.java

FloorPanelUI.java

IFloorPanel.java

FloorPanelConfiguration.java

FloorPanelFactory.java

1. UserPanel -

UserPanelUI.java

1. UserPanelQueue -

UserPanelQueue.java

**Algorithm – Least Recently Used:**

Modified components are –

1. AdminConsole -

Gui.java

1. Algorithm -

AlgorithmFactory.java

LeastRecentlyUsedAlgorithm.java

1. MetaController -

MetaController.java

MetaControllerFactory.java

IMetaController.javaChapter #2: REGRESSION TEST MODELS, METHODS, AND CRITERIA



## WHITE-BOX REGRESSION TEST DESIGN



### Component Regression Test Design

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Number** | **Testing Type** | **Testing Technique** | **Method Name** | **Coverage** |
| **1.** | Component Testing | White Box Testing | State-based Testing | 1. State Coverage  2. Transition Coverage |
| Branch Testing | 1. Branch Condition Coverage |

#### Component Re-Test Models, Methods, and Criteria

##### Algorithm Component

###### Branch Based Testing: Algorithm

Branch Based Testing is a white Box Testing Method which makes use of the data flow graph to find the Branches in the source code and helps in deriving test cases pertinent to the branches/conditions. In the project Branch Based testing has been used to derive test cases for the modified elevator algorithm. The conditions include: the algorithm selection, the size of the car list and if the car has been selected as the best car or not. By using Branch Based Testing, we hope to achieve Branch as well as link coverage.

***Pseudo Code:***

If (lstcars.size()>=1 ) then

If (getAlgorithm()==Least Recently Used )

car=FindBestCar ();

If ( car !=null ) then

Move the car to the end of List

Else

Print( " Car does not exist" )

Else

Run the selected Algorithm

Else

Print (" No car in the List ")

##### Alarm Component

###### State Based Testing : Alarm

This method makes use of the State Based Graph to test all the different states affecting the alarm function. The test model used here is the state based tree. The coverage that is being hoped to achieve id the state based and Transition coverage meaning all the states and all the transitions are tested at least once. The test cases are derived for a finite set of independent paths which will cover all the different states and transitions.

#### Component Re-Test Cases And Test Data

##### Algorithm Component

###### Branch Based Testing: Algorithm

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Branch(Predicate Node)** | **Possible Outcome** | **T1** | **T2** | **T3** | **T4** |
| getAlgorithm()==Least Recently Used | T | X | X | X |  |
|  | F |  |  |  | X |
| lstcars.size()>=1 | T | X | X |  | X |
|  | F |  |  | X |  |
| Car!=null | T | X |  |  |  |
|  | F |  | X |  |  |

***Test Cases and Test data:***

|  |  |
| --- | --- |
| **Test Case ID:** WB-AL-BB-01 | **Test Item:** Algorithm |
| **Written By:** Bindiya Thomas | **Documented Date:** 10/21/2011 |
| **Test Type:** White Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Testing what happens to a user car in case of Least Recently used algorithm for a non empty queue | |
| **Operation procedure:**   1. **Select algorithm** 2. **Check if car list size >=1** 3. **Find out if car is used** | |
| **Pre-conditions:**  Least recently used algorithm is selected  Car list size is greater than 1.  Car is checked with null.Car is not null | **Post-conditions:**  List of cars is updated based on the algorithm |
| **Inputs data and/or events:**  List of cars | **Expected output data and/or events:**  Deregister the Car(Move it to the end of the queue) |
| **Required test scripts: -** None |  |

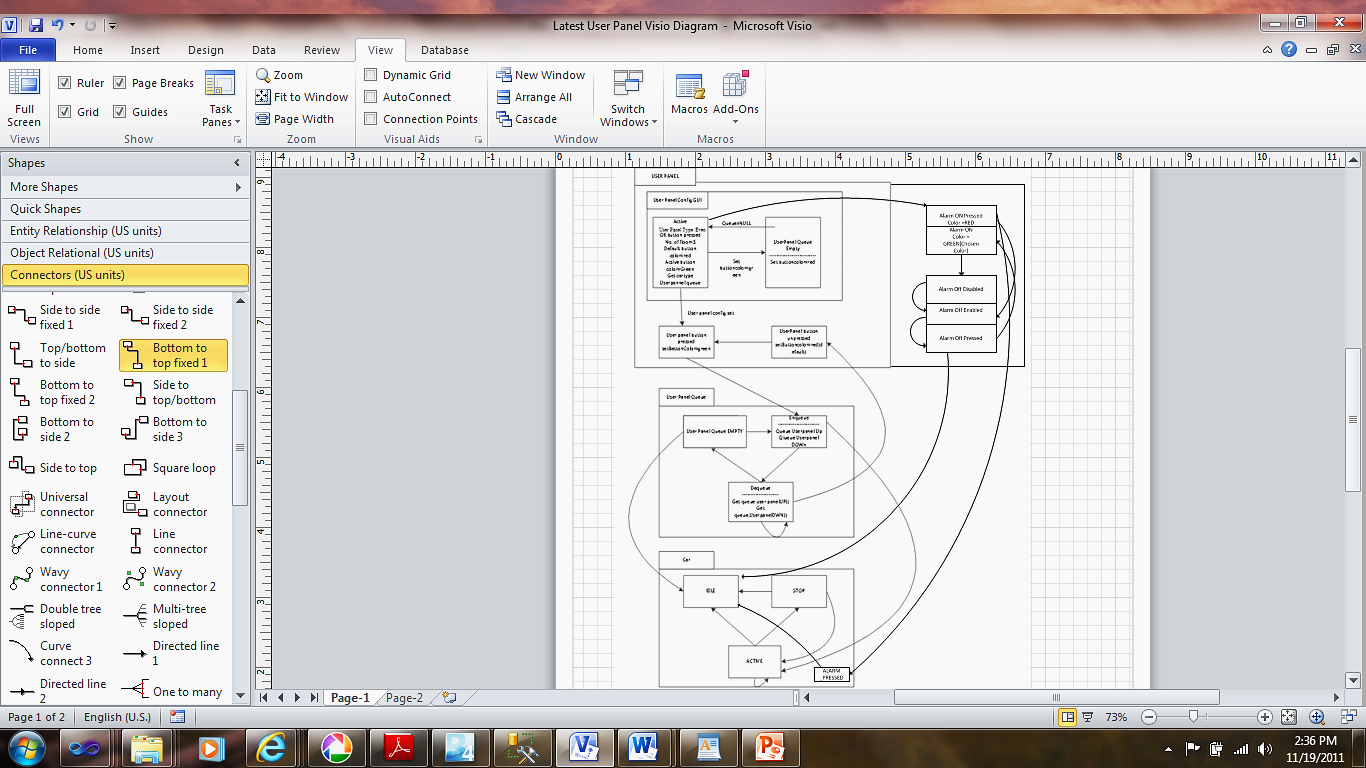
|  |  |
| --- | --- |
| **Test Case ID:** WB-AL-BB-02 | **Test Item:** Algorithm |
| **Written By:** Bindiya Thomas | **Documented Date:** 10/21/2011 |
| **Test Type:** White Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Testing what happens to a user car in case of Least Recently used algorithm for a non empty queue | |
| **Operation procedure:**   1. **Select algorithm** 2. **Check if car list size >=1** 3. **Find out if car is used** | |
| **Pre-conditions:**  Least recently used algorithm is selected  Car list size is greater than 1.  Car is checked with null. Car is equal to null. | **Post-conditions:**  List of cars is updated based on the algorithm |
| **Inputs data and/or events:**  List of cars | **Expected output data and/or events:**  Car does not exist. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** WB-AL-BB-03 | **Test Item:** Algorithm |
| **Written By:** Bindiya Thomas | **Documented Date:** 10/21/2011 |
| **Test Type:** White Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Testing what happens to a user car in case of Least Recently used algorithm for a empty queue of cars | |
| **Operation procedure:**   1. **Select algorithm** 2. **Check if car list size >=1** 3. **Find out if car is used** | |
| **Pre-conditions:**  Least recently used algorithm is selected  Car list size is not greater than 1. | **Post-conditions:**  List of cars is updated based on the algorithm |
| **Inputs data and/or events:**  List of cars | **Expected output data and/or events:**  Print Message: There is no car in the list |
| **Required test scripts: -** None |  |

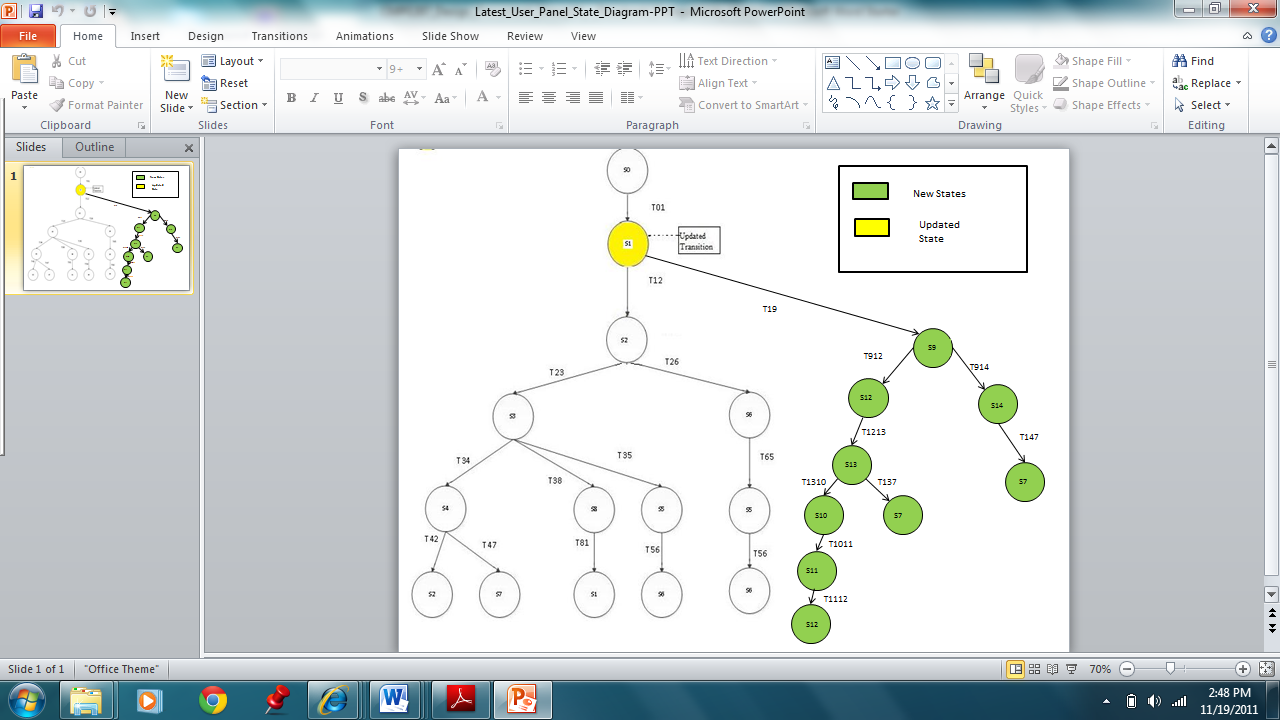
|  |  |
| --- | --- |
| **Test Case ID:** WB-AL-BB-03 | **Test Item:** Algorithm |
| **Written By:** Bindiya Thomas | **Documented Date:** 10/21/2011 |
| **Test Type:** White Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Testing what happens if any least recently algorithm is not used | |
| **Operation procedure:**   1. **Select algorithm** 2. **Check if car list size >=1** 3. **Find out if car is used** | |
| **Pre-conditions:**  Least recently used algorithm is not selected. Car list size is greater than 1. | **Post-conditions:**  List of cars is updated based on the algorithm which is selected |
| **Inputs data and/or events:**  List of cars | **Expected output data and/or events:**  Shortest Path or Random algorithm is used to control the elevator. |
| **Required test scripts: -** None |  |

##### Alarm Component

###### State Based Testing : Alarm



**STATE DIAGRAM:**



***Test Cases***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

***States***

S0 : Initial State

S1 : Configuration State

S2 : User Panel Idle State

S3 : Dequeue Floor Number

S4 : User Panel queue empty

S5 : Car is active

S6 : Enqueue Floor Number

S7 : Car is Idle

S8 : Deactive user panel button color

**S9: Alarm ON Pressed**

**S10:Alarm ON Color=GREEN**

**S11: Alarm OFF disabled**

**S12: Alarm OFF Enabled**

**S13: Alarm OFF pressed**

**S14: CAR-ALARM\_PRESSED**

Transitions

T01 - Configuring User Panel.

T12 - User Panel activated

T23 - Request is served, destination floor = request floor.

T34 – Remove from queue

T42 – User panel is set to idle

T47 – Car is reached destination and is idle

T38 – User panel is deactivate/disabled after dequeue.

T81 – User panel button color deactivated.

T35, T56 - Enqueue and Dequeue due to more request.

T26 - Request for floor number.

T65 - Server request from queue, car is active.

T56 – Enqueue to server more request

T19-Alarm ON Pressed

T912- Alarm OFF gets Enabled

T914- Car state moves to Alarm Pressed

T1213-Alarm OFF gets pressed after it is enabled

T1310- Alarm OFF pressed turns Alarm ON color

T137- Alarm OFF moves car state to IDLE

T1011- When Alarm ON is not-pressed, the Alarm OFF turns disabled

T1112-Alarm OFF disabled can move to enabled when Alarm ON is Pressed.

T147-Alarm Pressed moves Car state to IDLE.

|  |  |
| --- | --- |
| **Tested Case ID:** WB-SB-01 | **Test Item:** User Panel |
| **Wrote by:** Bindiya Thomas | **Documented Date:** 03/28/2011 |
| **Test Type:** White Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Validate userpanel configuration | |
| **Operation procedure:** Select a Level 0 Node  Make transition to its next node.  **S0->T01->S1->T12->S2** | |
| **Pre-Conditions :**  Pointer should be at initial node. Node should have branch to make transition**.**  User Panel is in idle state and type sequential | **Post Condition:**  Transition should be successful and at all floors |
| **Specifications:** | |
| **Input:**  The component is executed.  The values are set.   1. No. of floor=5 2. Default button color=red 3. Activate button color=green 4. car type=default 5. User panel queue=default 6. User Panel Type=Sequential   OK button event is triggered | **Expected Output:**  The configuration is set and all the configured values are set i.e  numberFloors=5  activeButtonColor=red  carType=default  queueType=default  User Panel Type=Sequential |
| **Required Test Script:** None | |

|  |  |
| --- | --- |
| **Tested Case ID:** WB-SB-02 | **Test Item:** User Panel |
| **Wrote by:** Bindiya Thomas | **Documented Date:** 03/28/2011 |
| **Test Type:** White Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Validate userpanel configuration | |
| **Operation procedure:** Select a Level 0 Node  Make transition to its next node.  **S0->T01->S1->T12->S2** | |
| **Pre-Conditions :**  Pointer should be at initial node. Node should have branch to make transition**.**  User Panel is in idle state and type even | **Post Condition:**  Transition should be successful and at all even numbered floors |
| **Specifications:** | |
| **Input:**  The component is executed.  The values are set.   1. No. of floor=5 2. Default button color=red 3. Activate button color=green 4. car type=default 5. User panel queue=default 6. User Panel Type=even   OK button event is triggered | **Expected Output:**  The configuration is set and all the configured values are set i.e  numberFloors=5  activeButtonColor=red  carType=default  queueType=default  User Panel Type=even |
| **Required Test Script:** None | |

|  |  |
| --- | --- |
| **Tested Case ID:** WB-SB-03 | **Test Item:** User Panel |
| **Wrote by:** Bindiya Thomas | **Documented Date:** 03/28/2011 |
| **Test Type:** White Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Validate userpanel configuration | |
| **Operation procedure:** Select a Level 0 Node  Make transition to its next node.  **S0->T01->S1->T12->S2** | |
| **Pre-Conditions :**  Pointer should be at initial node. Node should have branch to make transition**.**  User Panel is in idle state and type odd | **Post Condition:**  Transition should be successful and at all odd numbered floors |
| **Specifications:** | |
| **Input:**  The component is executed.  The values are set.   1. No. of floor=5 2. Default button color=red 3. Activate button color=green 4. car type=default 5. User panel queue=default 6. User Panel Type=odd   OK button event is triggered | **Expected Output:**  The configuration is set and all the configured values are set i.e  numberFloors=5  activeButtonColor=red  carType=default  queueType=default  User Panel Type=odd |
| **Required Test Script:** None | |

|  |  |
| --- | --- |
| **Tested Case ID:** WB-SB-04 | **Test Item:** User Panel |
| **Wrote by:** Bindiya Thomas | **Documented Date:** 03/28/2011 |
| **Test Type:** White Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Validate floor numbers being added to the up and down user panel queue | |
| **Operation procedure:** Select a Level 0 Node  Make transition to its next node.  **S0->T01->S1->T12->S2** | |
| **Pre-Conditions :**  Pointer should be at initial node. Node should have branch to make transition**.**  User Panel is in idle state and type set as sequential | **Post Condition:**  Transition should be successful at all the floors |
| **Specifications:** | |
| **Input:**  Floor no.=5 is pressed  The car is on 4th floor  Floor no. = 1 is pressed  The car is on 3rd floor | **Expected Output:**  queueUserPanelRequestUp=5  queueUserPanelRequestDown=1 |
| **Required Test Script: None** | |

|  |  |  |
| --- | --- | --- |
| **Tested Case ID:** WB-SB-05 | **Test Item:** User Panel | |
| **Wrote by:** Bindiya Thomas | **Documented Date:** 03/28/2011 | |
| **Test Type:** White Box | **Test Suite #:1.2** | |
| **Product Name:** Elevator System | **Release and Version No:1.2** | |
| **Test case Description:**  Validate that the user panel queue is dequeueing. | | |
| **Operation procedure:** Select a Level 1 Node  Make transition to its next node.  **S0->T01->S1->T12->S2->T23->S3** | | |
| **Pre-Conditions :**  Pointer should be at initial node. Node should have branch to make transition**.**  User Panel is in idle state | **Post Condition:**  Transition should be successful at all the floors | |
| **Specifications:** | | |
| **Input:**  Floor no is being de queued | | **Expected Output:**  queueUserPanelRequestUp  queueUserPanelRequestDown  Should be dequeued when the this.destinationFloorNumber=destinationFloorNumber |
| **Required Test Script:** None | | |

|  |  |
| --- | --- |
| **Tested Case ID:** WB-SB-06 | **Test Item:** User Panel |
| **Wrote by:** Bindiya Thomas | **Documented Date:** 03/28/2011 |
| **Test Type:** White Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Validate that the user panel queue is enqueueing. | |
| **Operation procedure:** Select a Level 1 Node  Make transition to its next node.  **S0->T01->S1->T12->S2->T26->S6->T65->S5->T56->S6** | |
| **Pre-Conditions :**  Pointer should be at initial node. Node should have branch to make transition**.**  User Panel is in idle state | **Post Condition:**  Transition should be successful at all the floors |
| **Specifications:** | |
| **Input:**  The floor number is pressed  Floor number =4 | **Expected Output:**  The floor no. should be enqueued in the  queueUserPanelRequestUp  queueUserPanelRequestDown  and the car status should be set to active. |
| **Required Test Script:** None | |

|  |  |
| --- | --- |
| **Tested Case ID:** WB-SB-07 | **Test Item:** User Panel |
| **Wrote by:** Bindiya Thomas | **Documented Date:** 03/28/2011 |
| **Test Type:** White Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Validate that the user panel queue is dequeueing and the queue is set to empty. | |
| **Operation procedure:** Select a Level 2 Node  Make transition to its next node.  **S0->T01->S1->T12->S2->T23->S3->T34->S4** | |
| **Pre-Conditions :**  Pointer should be at initial node. Node should have branch to make transition**.**  User Panel is in idle state | **Post Condition:**  Transition should be successful at all the floors |
| **Specifications:** | |
| **Input:**  Floor number =4  The above floor no. is enqueued. and the floor no. starts dequeueing as the this.destinationFloorNumber=destinationFloorNumber | **Expected Output:**  As  this.destinationFloorNumber=destinationFloorNumber  The floor no. are dequeued from the queue and the user panel queue should be set to empty  queueUserPanelRequestUp.size()=  queueUserPanelRequestDown.size()=0 |
| **Required Test Script:** None | |

|  |  |
| --- | --- |
| **Tested Case ID:** WB-SB-08 | **Test Item:** User Panel |
| **Wrote by:** Bindiya Thomas | **Documented Date:** 03/28/2011 |
| **Test Type:** White Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Validate that the user panel queue is dequeueing and the queue is set to empty. | |
| **Operation procedure:** Select a Level 2 Node  Make transition to its next node.  **S0->T01->S1->T12->S2->T23->S3->T38->S8->T81->S1**. | |
| **Pre-Conditions :**  Pointer should be at initial node. Node should have branch to make transition**.**  User Panel is in idle state | **Post Condition:**  Transition should be successful at all the floors |
| **Specifications:** | |
| **Input:**  Floor number =4  The above floor no. is enqueued. and the floor no. starts dequeueing as the this.destinationFloorNumber=destinationFloorNumber | **Expected Output:**  As  this.destinationFloorNumber=destinationFloorNumber  The floor no. are dequeued from the queue and the user floor button color is deactivated. i.e.  setButtonColor=red(deactivated color) |
| **Required Test Script:** None | |

|  |  |
| --- | --- |
| **Tested Case ID:** WB-SB-09 | **Test Item:** User Panel |
| **Wrote by:** Bindiya Thomas | **Documented Date:** 03/28/2011 |
| **Test Type:** White Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Validate that user panel queue is dequeueing and puting the car from active to stop state. | |
| **Operation procedure:** Select a Level 2 Node  Make transition to its next node.  **S0->T01->S1->T12->S2->T23->S3->T35->S5->T56->S6** | |
| **Pre-Conditions :**  Pointer should be at initial node. Node should have branch to make transition**.**  User Panel is in idle state | **Post Condition:**  Transition should be successful at all the floors |
| **Specifications:** | |
| **Input:**  Floor number =4,3,5,1  The above floor no. is enqueued. and the floor no. starts dequeueing as the this.destinationFloorNumber=destinationFloorNumber | **Expected Output:**  As  this.destinationFloorNumber=destinationFloorNumber  The floor no. is dequeued from the queue i.e. this.destinationFloorNumber=destinationFloorNumber  and the car reaches the stop state and floor no. keeps on dequeueing, making the car in an active state until it de queues all the floor numbers. |
| **Required Test Script:** None | |

|  |  |
| --- | --- |
| **Tested Case ID:** WB-SB-10 | **Test Item:** User Panel |
| **Wrote by:** Bindiya Thomas | **Documented Date:** 03/28/2011 |
| **Test Type:** White Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Validate that when user panel queue is empty the car status should be idle. | |
| **Operation procedure:** Select a Level 3 Node  Make transition to its next node.  **S0->T01->S1->T12->S2->T23->S3->T34->S4->T47->S7** | |
| **Pre-Conditions :**  Pointer should be at initial node. Node should have branch to make transition**.**  User Panel is in idle state | **Post Condition:**  Transition should be successful at all the floors |
| **Specifications:** | |
| **Input:**  Floor number =4,3,5,1  The above floor no. is enqueued. and the floor no. starts dequeueing as the this.destinationFloorNumber=destinationFloorNumber | **Expected Output:**  As  this.destinationFloorNumber=destinationFloorNumber  The floor no. is dequeued from the queue i.e. this.destinationFloorNumber=destinationFloorNumber  And queueUserPanelRequestUp.size()=0  queueUserPanelRequestDown.size()=0  i.e. the user panel queue is empty and the car status is set to idle i.e the car is in idle state. |
| **Required Test Script:** None | |

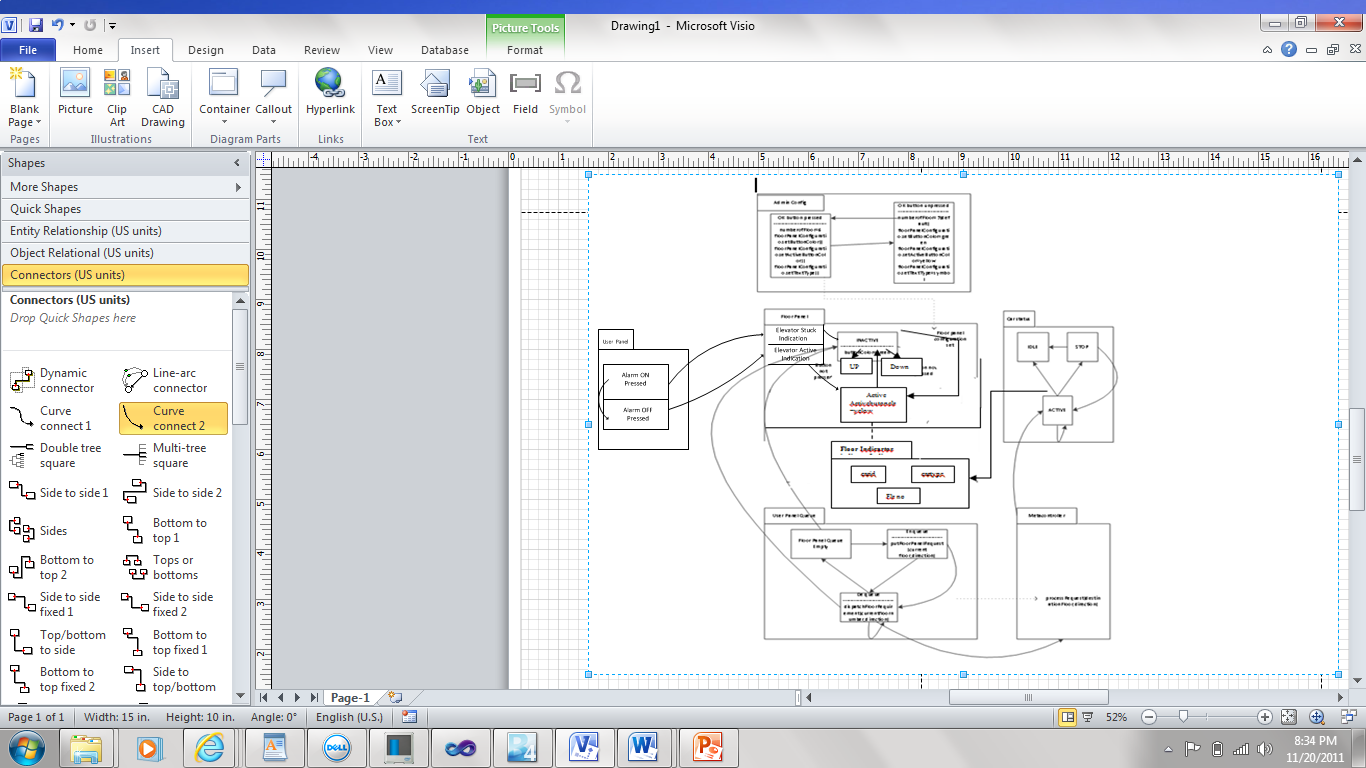
|  |  |
| --- | --- |
| **Tested Case ID:** WB-SB-11 | **Test Item:** User Panel |
| **Wrote by:** Bindiya Thomas | **Documented Date:** 03/28/2011 |
| **Test Type:** White Box | **Test Suite #:**1.2 |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Validate that the user panel queue is enqueueing. | |
| **Operation procedure:** Select a Level 3 Node  Make transition to its next node.  **S0->T01->S1->T12->S2->T23->S3->T34->S4->T42->S2** | |
| **Pre-Conditions :**  Pointer should be at initial node. Node should have branch to make transition**.**  User Panel is in idle state | **Post Condition:**  Transition should be successful at all the floors |
| **Specifications:** | |
| **Input:**  The above floor no. is de queued. and the user panel queue reaches the empty state  i.e.  queueUserPanelRequestUp.size()=0  queueUserPanelRequestDown.size()=0  The floor no. is enqueued  Floor number =4,3,5,1 | **Expected Output:**  The floor no. is en queued in the  queueUserPanelRequestUp  or  queueUserPanelRequestDown |
| **Required Test Script:** None | |

**New Test Cases:**

|  |  |
| --- | --- |
| **Tested Case ID:** WB-SB-12 | **Test Item:** User Panel |
| **Wrote by:** Bindiya Thomas | **Documented Date:** 10/16/2011 |
| **Test Type:** White Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Validate that Alarm ON and OFF buttons function as expected . | |
| **Operation procedure:** Select a Level 1 Node  Make transition to its next node.  **S1->T19->S9->T912->S12->T1213->S13->T1310->S10->T1011-S11->T1112->S12** | |
| **Pre-Conditions :**  Pointer should be at Configurationnode. Node should have branch to make transition**.**  User Panel is in Configuration state | **Post Condition:**  Transition should be successful and at all floors |
| **Specifications:** | |
| **Input:**  The component is executed.  The values are set.   1. No. of floor=5 2. Default button color=Green 3. Activate button color=Blue 4. car type=default 5. User panel queue=default 6. Alarm ON is Pressed 7. Alarm OFF is Pressed | **Expected Output:**  When the Button Alarm ON is pressed, the Alarm OFF button gets enabled. Alarm ON button color turns green.  The floor numbers on User Panel are disabled.  When the Alarm OFF Button is pressed, the Alarm ON button color turns to GREEN.  The Alarm OFF button is disabled.  The floor number buttons on User Panel are enabled. |
| **Required Test Script:** None | |

|  |  |
| --- | --- |
| **Tested Case ID:** WB-SB-13 | **Test Item:** User Panel |
| **Wrote by:** Bindiya Thomas | **Documented Date:** 10/16/2011 |
| **Test Type:** White Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Validate that Alarm OFF button press moves car state to IDLE. | |
| **Operation procedure:** Select a Level 1 Node  Make transition to its next node.  **S1->T19->S9->T912->S12->T1213->S13->T137->S7** | |
| **Pre-Conditions :**  Pointer should be at Configurationnode. Node should have branch to make transition**.**  User Panel is in Configuration state | **Post Condition:**  Transition should be successful and at all floors |
| **Specifications:** | |
| **Input:**   1. Car.getStatus=ACTIVE. 2. Alarm ON button is pressed 3. Alarm OFF button is pressed. | **Expected Output:**  Car.getStatus() moves from ACTIVE to ALARM\_PRESSED to IDLE. |
| **Required Test Script:** None | |

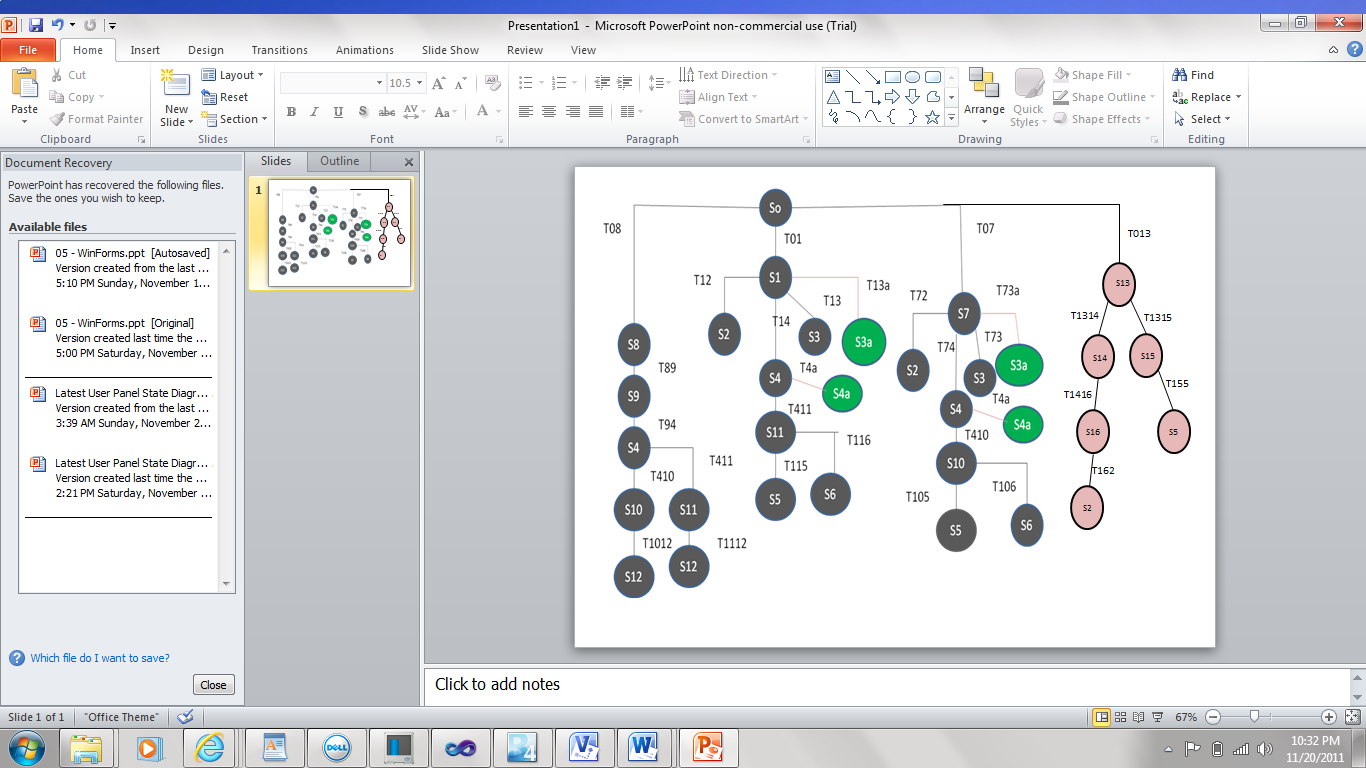
|  |  |
| --- | --- |
| **Tested Case ID:** WB-SB-14 | **Test Item:** User Panel |
| **Wrote by:** Bindiya Thomas | **Documented Date:** 10/16/2011 |
| **Test Type:** White Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Validate that Alarm ON press causes Car status to be ALARM\_PRESSED and Alarm OFF press moves Car Status to IDLE. | |
| **Operation procedure:** Select a Level 1 Node  Make transition to its next node.  **S1->T19->S9->T914->S14->T147-> S7** | |
| **Pre-Conditions :**  Pointer should be at Configurationnode. Node should have branch to make transition**.**  User Panel is in Configuration state | **Post Condition:**  Transition should be successful and at all floors |
| **Specifications:** | |
| **Input:**   1. Car.getStatus=ACTIVE. 2. Alarm ON button is pressed 3. Alarm OFF button is pressed. | **Expected Output:**  Alarm ON button press causes car state to move from ACTIVE to ALARM\_PRESSED.  Alarm OFF button press causes Car state to move from ALARM\_PRESSED to IDLE. |
| **Required Test Script:** None | |

Alarm Floor Panel 

**STATE DIAGRAM:**

New Node

Updated Node



|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

***States:***

The following are the states in the tree diagram

S0 - Initial state of the tree diagram from where the execution starts

S1 - Down button is pressed in floor panel

S2 - FP\_Active (floor panel is in active state)

S3 - activeButtonColor configurable

S3a- Floor Indicator configurable

S4 - Command is sent to the queue in floor panel queue

S4a- Update floor indicator status

S5 - FP\_Idle (floor panel is in idle state)

S6 - activeButtonColor null

S7 - Up button is pressed in floor panel

S8 - Enqueued

S9 - Dequeued

S10 - Disable up button

S11 - Disable down button

S12 - Disable floor panel UI

S13 - Alarm ON Pressed

S14 - Alarm OFF Pressed

S15 – Floor Panel Indication Elevator Stuck

S16 – Floor Panel Indication Elevator Active

***Test Cases:***

The following are the transitions in the above tree diagram :

T01 - Press the down button in the floor panel

T12, T72 - The floor panel is changed to active state

T13, T73 - The button color is activated i.e configured**,**

T13a- floor indicator is activated for down button.

T14, T74, T94 - Command is sent to the queue awaiting to get processed,req.

T14a - process and update the floor indicator status.

T413 - The down button of the floor panel is disabled

T105, T115 - The floor panel is changed to idle state

T106, T116 - The button color is deactivated i.e set to null

T07 - Press the up button in the floor panel

T414 - The up button of the floor panel is disabled

T08 - The request of the floor panel is enqueued

T89 - The request is dequeued

T410 - disable the up button in the floor panel

T411 - disable the down button in the floor panel

T1012, T1112 - disable the floor panel.

T013- Alarm is Pressed on User Panel

T1314 – Alarm OFF is Pressed

T1315 –Floor Panel Indication Shows Elevator Stuck

T1416 – Floor Panel Indication Shows Elevator Active

T155 – Floor Panel Moves to IDLE state

T162 - Floor Panel moves to ACTIVE state

|  |  |
| --- | --- |
| **Test Case ID:** WB-SB-FP-01 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Bindiya Thomas | **Documented Date:** 04/01/2011 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description:** Validate that the dequeued function for dequeueing the floor number is working. S0-T01-S1-T12-S2-T08-S8-T89-S9**.** | |
| **Operation procedure:**   1. Press a active down button on floor panel. 2. Floor panel is active.   3.The floor no. is enqueued with current floor number and direction.  4. The request is kept in the queue.  5. Then dequed. | |
| **Pre-conditions:**  Floor Panel is in active state. | **Post-conditions:**  Floor number should be dequeued. |
| **Inputs data and/or events:**  User presses the UP or down button in the floor panel one after another. | **Expected output data and/or events:**  Values from the queue  **queueFloorPanelRequest**  are emptied by calling the function  **dispatchFloorRequest(int currentFloornumber, Direction direction)**  repeatably. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** WB-SB-FP-02 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Bindiya Thomas | **Documented Date:** 04/01/2011 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description** Validate that the floor panel queue reaches the empty state.  S0-T01-S1-T12-S2-T08-S8-T89-S9**.** | |
| **Operation procedure:**  **Operation procedure:**   1. Press a active down button on floor panel. 2. Floor panel is active.   3.The floor no. is enqueued with current floor number and direction.  4. The request is kept in the queue.  5. Then dequed | |
| **Pre-conditions:**  Floor Panel is in active state. | **Post-conditions:**  Floor number should be dequeued. |
| **Inputs data and/or events:**  . User presses the down button in the floor panel | **Expected output data and/or events:**  The floor numbers should be dispacthed one after the other from the queue repeatablty i.e.  Values from the queue  **queueFloorPanelRequest**  **are emptied** by calling the function  **dispatchFloorRequest(int currentFloornumber, Direction direction)**  repeatably.  and finally  **queueFloorPanelRequest.size() == 0**  i.e.the floor queue is empty |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** WB-SB-FP-03 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Bindiya Thomas | **Documented Date:** 04/01/2011 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description** When the user presses the up button in the floor panel, the request is put into the floor panel queue. The floor panel is set to active state and the button color is activated i.e. configured **.** S0 -T07-S7**-**T72-S2**,** S0 -T07-S7-T73-S3 | |
| **Operation procedure:**  1. User presses the up button in the floor panel.  2.The floor panel get to active state since the user presses the button  3. The button color changes since the user presses the button | |
| **Pre-conditions:**  The system should be working properly. The floor panel should take the input from the user. | **Post-conditions:**  The command is processed. |
| **Inputs data and/or events:**  . User presses the up button in the floor panel | **Expected output data and/or events:**  1. The floor panel is in active state.  2. The button color of floor panel is configured or changed. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** WB-SB-FP-04 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Bindiya Thomas | **Documented Date:** 04/01/2011 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description** When the user presses the up button in the floor panel, the request is put into the floor panel queue. Floor panel update the floor indicator status.  S0 - T07- S7-T74-S4-T74a-S4a | |
| **Operation procedure:**  1. User presses the up button in the floor panel.  2. The Floor indicator gets updated . | |
| **Pre-conditions:**  The system should be working properly. The floor panel should take the input from the user. | **Post-conditions:**  The command is processed. |
| **Inputs data and/or events:**  . User presses the up button in the floor panel | **Expected output data and/or events:**  1. The floor panel with floor indiacator get updated. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** WB-SB –FP-05 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Bindiya Thomas | **Documented Date:** 04/01/2011 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description** When the user presses the up/down button in the floor panel, The floor indicator gets configurable. Panel is set to active state.  S0-T01-S1-T13a-S3a**,** S0 -T07-S7-T73a-S3a | |
| **Operation procedure:**  1. User presses the Up/Down button in the floor panel.  2.The floor panel get to active state since the user presses the button  3. The Floor indicator gets configurable . | |
| **Pre-conditions:**  The system should be working properly. The floor panel should take the input from the user. | **Post-conditions:**  The Floor Panel get activated. |
| **Inputs data and/or events:**  . User presses the up/down button in the floor panel | **Expected output data and/or events:**  1. The floor panel is in active state.  2. The floor panel get configurable with floor indicator. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** WB-SB –FP-06 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Bindiya Thomas | **Documented Date:** 04/01/2011 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description** When the user presses the up button in the floor panel, the request is put into the floor panel queue and the command is processed. After command processed button color is turns to its original color.  s0-T07- s7-T74- s4-T410- s10-T105- s5, s0 –T07-s7-T74 -s4-T410- s10-T106- s6 | |
| **Operation procedure:**  1. User presses the up button in the floor panel.  2. The command is taken from the queue and gets processed.  3. The after button color is set to its previous color after the request is processed. | |
| **Pre-conditions:**  The system should be working properly. The floor panel should take the input from the user. | **Post-conditions:**  The next command is ready to get processed since the previous command is successfully completed. |
| **Inputs data and/or events:**  .User presses the up button in the floor panel | **Expected output data and/or events:**  1. The command is processed from the queue i.e. after dequeueing.  2. After, the button color turns to its previous color. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** WB-SB-FP-07 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Bindiya Thomas | **Documented Date:** 04/01/2011 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description** When the user presses the down button in the floor panel, the request is put into the floor panel queue and the command is processed. After command processed button color is turns button color is turn to its previous color.  S0-T01- S1-T14- S4-T411- S11-T115-S5, S0-T01- S1-T14- S4-T411- S11-T115-S6 | |
| **Operation procedure:**  1. User presses the down button in the floor panel.  2. The command is taken from the queue and gets processed.  3. The button color turns to its previous color. | |
| **Pre-conditions:**  The system should be working properly. The floor panel should take the input from the user. | **Post-conditions:**  The next command is ready to get processed since the previous command is successfully completed. |
| **Inputs data and/or events:**  . User presses the down button in the floor panel | **Expected output data and/or events:**  1. The command is processed from the queue  2. The button color turns to its previous color. |
| **Required test scripts: -** None |  |

**New Test Cases:**

|  |  |
| --- | --- |
| **Test Case ID:** WB-SB-FP-08 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Bindiya Thomas | **Documented Date:** 10/14/11 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description** Validating if pressing the Alarm OFF button in the User Panel changes the Indication in the floor panel for the appropriate floor and car.  S0-T013-S13-T1314-S14-T1416-S16-T162-S2 | |
| **Operation procedure:**  1. User presses the Alarm ON button in the User panel.  2. The User presses the Alarm OFF button in the User panel.  3. Check the floor panel indication | |
| **Pre-conditions:**  The system should be working properly. The user panel and floor panel should take the input from the user. | **Post-conditions:**  The next command is ready to get processed since the previous command is successfully completed. |
| **Inputs data and/or events:**  User Presses the Alarm ON button in the User Panel.  User Presses the Alarm OFFbutton in the User Panel. | **Expected output data and/or events:**   1. The Floor Panel indication shows Elevator Stuck and the color changes to RED. 2. The Floor Panel indication shows Elevator Stuck for the appropriate floor and car and the color changes to GREEN. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** WB-SB-FP-09 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Bindiya Thomas | **Documented Date:** 10/14/11 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description** Validating if pressing the Alarm ON button in User Panel shows Elevator Stuck in the Appropriate floor and car.  S0-T013-S13-T1315-S15-T155-S5 | |
| **Operation procedure:**  1. User presses the Alarm ON button in the User panel.  2. Check the floor panel indication | |
| **Pre-conditions:**  The system should be working properly. The user panel and floor panel should take the input from the user.  Floor Number =5  Car Selected=2 | **Post-conditions:**  The next command is ready to get processed since the previous command is successfully completed. |
| **Inputs data and/or events:**  User Presses the Alarm ON button in the User Panel. | **Expected output data and/or events:**  1. The Floor Panel indication shows Elevator Stuck and the color changes to RED for floor number 5 and car number 2. |
| **Required test scripts: -** None |  |

## BLACK-BOX REGRESSION TEST DESIGN



### Component Regression Test Design

For Component black box testing, we have used two popular black box testing methods –

* + - **Equivalence Partitioning**

In Equivalence partitioning, the input domain is divided into partitions of valid and invalid data sets. Atleast one test case is then written for each partition. This ensures that valid and invalid inputs, both are tested. In Equivalence Partitioning, properly partitioning the input domain is important.

* + - **Decision Table based testing**

Decision Table based testing is appropriate in cases where there are various conditions with associated actions while testing any system. Conditions and actions are identified based on the requirement specifications and corresponding test cases are derived.

Decision Table based testing ensures that all business rules and constraints of the system are validated. It guarantees that all possible combinations of conditions and their corresponding actions are tested.

Approach:

1. Identify all the possible conditions and their combinational cases.

2. Identify all the corresponding actions / responses to the cases.

3. Define a test case for each case ( or each column of the decision table )

Coverage:

1. Condition coverage

2. Case coverage

The above 2 methods have been used to test 3 of the components of the elevator system. They are –

* + - **Internal Alarm component in User Panel**
    - **Algorithm**
    - **External Alarm Component in Floor Panel**

The models, methods and criteria for the above two testing methods are provided in Section 2.2.1.1 and the corresponding Test cases and Test Data are mentioned in Section 2.2.1.2.

#### Component Re-Test Models, Methods, and Criteria

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Number** | **Testing Type** | **Testing class** | **Method Name** | **Coverage** |
| **1.** | Component Testing | Black Box Testing | Decision Table based Testing | Conditions & Actions coverage  Case coverage |
| Equivalence Testing | All Equivalence classes coverage |
| **2.** | System Level Functional testing | Black Box Testing | Decision Table Testing | Conditions and Actions (In Decision Table) coverage |
| Equivalence Partition Testing | All Equivalence classes coverage |

##### User Panel with Internal Alarm

###### Equivalence partitioning

Figure 1: Partitions for User Panel testing

Figure 2 : Partitions of User panel buttons pressed

Figure 3: Sub-Partitions for Alarm Off Button Pressed

Figure 4: Sub-Partitions for User Panel floor number buttons are pressed

Figure 5: Show Elevator Partitions

Figure 6: Select Alarm Type Partitions

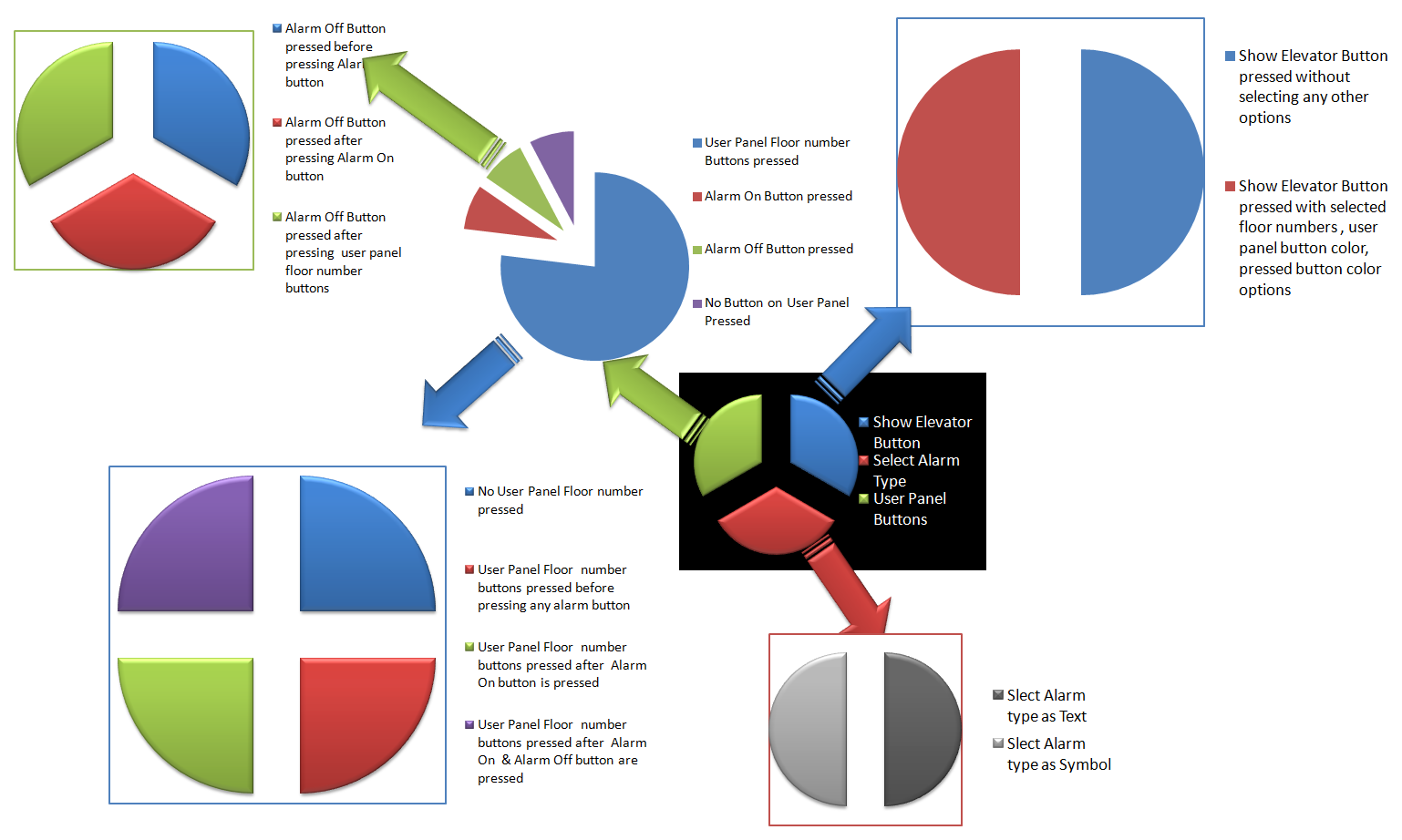


Figure 7: Combining all the partitions and 14 sub partitions for internal alarm component in User Panel

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

Based on the partitions and sub partitions highlighted above we have following 14 sub-partitions and we have one test case for each sub-partition.

|  |  |  |  |
| --- | --- | --- | --- |
| **Partition** | **Sub-Partition** | **Test Case ID** | **Output** |
| Show Elevator Button Pressed | Show Elevator Button pressed without selecting any other options | BB-UP-EP-01 | * Interface 2 generated with default Alarm buttons as Text ( ONALARM , OFFALARM ) , default userpanel and default floor panel |
| Show Elevator Button pressed with selected floor numbers , user panel button color, pressed button color options | BB-UP-EP-02 | * Interface 2 generated with selected number of cars, floor numbers, button colors and pressed button color |
| Select Alarm Type | Symbol | BB-UP-EP-03 | * Interface 2 generated with Alarm buttons as Symbols ( ^^ , VV ) , userpanel and floorpanel |
| Text | BB-UP-EP-04 | * Interface 2 generated with Alarm buttons as Text ( ONALARM , OFFALARM ) , userpanel and floor panel |
| User Panel Floor number Buttons pressed | No User Panel button pressed | BB-UP-EP-05 | * No action - no car moves * Car status remains "IDLE" |
| No User panel Floor Number pressed | BB-UP-EP-06 | * No action - car does not move * Car status remains " IDLE" |
| User Panel Floor number buttons pressed without pressing any alarm button | BB-UP-EP-07 | * Car moves to the appropriate floor * Car Status becomes " Moving Up/Down " |
| User Panel Floor number buttons pressed after Alarm On button is pressed | BB-UP-EP-08 | * User Panel floor number buttons are disabled * ONALARM Button Color = Red * OFFALARM Button enabled * Alarm Status on Floor Panel = " Car Stuck" * Car Status is "ALARM\_PRESSED" * Color of alarm status on respective car on Floor Panel is RED |
| User Panel Floor number buttons pressed after Alarm On & Alarm Off button are pressed | BB-UP-EP-09 | * User Panel floor number buttons are enabled * ONALARM Button Color = Green * OFFALARM Button disabled * Alarm Status on Floor Panel = " Car Active" * Car Status is "Car Active" * Color of alarm status on respective car on Floor Panel is Green * Car moves to the respective floor |
| User Panel Floor number buttons pressed before and after Alarm On & Alarm Off button are pressed | BB-UP-EP-10 | * User Panel floor number buttons are enabled * ONALARM Button Color = Green * OFFALARM Button disabled * Alarm Status on Floor Panel = " Car Active" * Car Status is "Car Active" * Color of alarm status on respective car on Floor Panel is Green * Car moves to the respective floor |
| Alarm On Button pressed | Alarm On Button working | BB-UP-EP-11 | * User Panel floor number buttons are disabled * ONALARM Button Color = Red * OFFALARM Button enabled * Alarm Status on Floor Panel = " Car Stuck" * Car Status is "ALARM\_PRESSED" * Color of alarm status on respective car on Floor Panel is RED * Car comes to a stop |
| Alarm Off Button pressed | Alarm Off Button pressed before pressing Alarm On button | BB-UP-EP-12 | * No car should move * Alarm Off button should be disabled |
| Alarm Off Button pressed after pressing Alarm On button | BB-UP-EP-13 | * Alarm On Button color is Green * Car comes to an IDLE mode * Alarm Off Button disabled * User Panel floor number buttons enabled * Car Status becomes "IDLE" * Color of alarm status on respective car on Floor Panel is Green * Alarm Status on Floor Panel = "Car Active" |
| Alarm Off Button pressed after pressing user panel floor number buttons | BB-UP-EP-14 | * Alarm off button should be disabled * No action / effect on car movement and Car keeps on moving up / down |

##### Equivalence Partitioning - Test Case Modification Summary

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Component** | **Test Type** | **Test Method** | **# of Test Cases** | | | |
| **Reused** | **Changed** | **Added** | **Deleted** |
| User Panel with Internal Alarm | Black Box | Equivalence Partitioning | 2 | 5 | 7 | 7 |

The Deleted Test cases for User Panel with Internal Alarm Component has been added to the appendix. Graphical Representation for the above details has been provided below:

***Key Points:***

The Exsisting user Panel was added the alarm component which consisted of Alarm ON and Alarm OFF buttons . Due to the inclusion of these buttons more number of partitions and sub partitions were introduced. Thus leading to addition of Test Cases.

##### Decision Table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 | T11 | T12 | T13 | T14 |
| **Conditions:** | **C1:** Floor numbers ( 1- max floor number ) selected on user panel | F | T | T | T | T | T | T | T | T | T | T | T | T | T |
| **C2:** Button Color (Red, Green, Yellow, and Blue) selected. | F | T | F | T | T | T | T | T | T | T | T | T | T | T |
| **C3:** Button Pressed Color same as C2 (Red, Green, Yellow, Blue) | F | F | F | T | T | F | F | F | F | F | F | F | F | F |
| **C4:** Alarm Type selected as Symbol | F | F | F | T | F | T | T | T | T | F | T | T | F | T |
| **C5:** Show Elevator Button Pressed | T | T | T | T | T | T | T | T | T | T | T | T | T | T |
| **C6**: User Panel :Floor Buttons pressed before Alarm buttons are pressed | - | - | T | T | T | T | F | F | T | F | T | T | T | F |
| **C7:** ONALARM Button Pressed | - | - | - | - | - | T | T | T | T | T | T | T | T | T |
| **C8:** OFFALARM Button Pressed after pressing ONALARM button | - | - | - | - | - | F | F | T | T | F | T | F | T | T |
| **C9:** User Panel : Floor numbers are pressed after Alarm buttons are pressed | - | - | - | - | - | F | F | F | T | F | F | T | T | T |
| Actions: | A1: No action | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A2: Car moves to the appropriate floor |  |  | X | X | X |  |  |  | X |  |  |  | X | X |
| A3: Interface 2 generated with Alarm buttons as Symbols ( ^^ , VV ) , userpanel and floorpanel |  |  |  | X |  | X | X | X | X |  | X | X |  | X |
| A4: Interface 2 generated with Alarm buttons as Text ( ONALARM , OFFALARM ) , userpanel and floor panel | X | X | X |  | X |  |  |  |  | X |  |  | X |  |
| A5: ONALARM Button Color = Green |  |  | X |  | X |  |  | X | X |  | X |  | X | X |
| A6: ONALARM Button Color = Red |  |  |  |  |  | X | X |  |  | X |  | X |  |  |
| A7: OFFALARM Button disabled |  |  | X |  | X |  |  | X | X |  | X |  | X | X |
| A8: OFFALARM Button enabled |  |  |  |  |  | X | X |  |  | X |  | X |  |  |
| A9: Alarm Status on Floor Panel = " Car Stuck" |  |  |  |  |  | X | X |  |  | X |  | X |  |  |
| A10: Alarm Status on Floor Panel = "Car Active" |  |  | X |  | X |  |  | X | X |  | X |  | X | X |
| A11: Car comes to a stop or continues to be idle |  |  |  |  |  | X | X |  |  | X |  |  |  |  |
| A12: User Panel floor number buttons disabled |  |  |  |  |  | X | X |  |  | X |  | X |  |  |
| A13: User Panel floor number buttons enabled |  |  |  |  |  |  |  | X | X |  | X |  | X | X |
| A14: Car Status becomes "ALARM\_PRESSED" |  |  |  |  |  | X | X |  |  | X |  | X |  |  |
| A15: Car Status becomes "IDLE" |  |  |  |  |  |  |  | X |  |  | X |  |  |  |
| A16: Color of alarm status on respective car on Floor Panel is GREEN |  |  |  |  |  |  |  | X | X |  | X |  | X | X |
| A17: Color of alarm status on respective car on Floor Panel is RED |  |  |  |  |  | X | X |  |  | X |  | X |  |  |
| A18: Car Status becomes " Moving Up/Down " |  |  |  | X |  |  |  |  | X |  |  |  | X | X |

##### Decision Table - Test Case Modification Summary

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Component** | **Test Type** | **Test Method** | **# of Test Cases** | | | |
| **Reused** | **Changed** | **Added** | **Deleted** |
| User Panel with Internal Alarm | Black Box | Decision Table | 3 | 2 | 9 | 5 |

The Deleted Test cases for User Panel with Internal Alarm Component have been added to the appendix. Graphical Representation for the above details has been provided below:

***Key Points:***

The Exsisting user Panel was added the alarm component which consisted of Alarm ON and Alarm OFF buttons . Due to the inclusion of these buttons more number of conditions and actions were introduced in the Decision Table. Thus leading to addition of Test Cases

##### Algorithm Component

###### Equivalence Partitioning: Algorithm

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

*Note: Since there was not separate Black box testing for Algorithm component, this section has all new test cases.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Algorithm** | **Partition** | **Test Case ID** | **Output** |
| Least Recently Used | None of the cars are used | BB-AL-EP-01 | 1st car is selected |
| Cars less than the total number of cars are used | BB-AL-EP-02 | The IDLE car is selected |
| All the cars are used | BB-AL-EP-03 | Least recently used car is selected |
| Shortest Path | None of the cars are used | BB-AL-EP-04 | First car is used |
| Cars less than the total number of cars are used | BB-AL-EP-05 | Car in IDLE state is used |
| All the cars are used, floor panel button pressed on floor above the floor in which car is at present | BB-AL-EP-06 | The car closest to the floor in which button is pressed is used |
| All the cars are used, floor panel button pressed on floor below the floor in which car is at present | BB-AL-EP-07 | The car closest to the floor in which button is pressed is used |
| Random | None of the cars are used | BB-AL-EP-08 | Car selection is random |
| Cars less than the total number of cars are used | BB-AL-EP-09 | Car selection is random |
| All the cars are used | BB-AL-EP-10 | Car selection is random |

###### Decision Table: Algorithm

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

*Note: Since there was not separate Black box testing for Algorithm component, this section has all new test cases.*

Decision based testing for Algorithm Component is as below –

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **T1** | **T2** | **T3** | **T4** | **T5** | **T6** | **T7** | **T8** | **T9** |
| **Conditions** | C1: Random Algorithm selected from Admin Console | **T** | **T** | **T** | **F** | **F** | **F** | **F** | **F** | **F** |
| C2: Shortest Path algorithm selected from Admin console | **F** | **F** | **F** | **T** | **T** | **T** | **F** | **F** | **F** |
| C3: Least Recently used algorithm selected from Admin Console | **F** | **F** | **F** | **F** | **F** | **F** | **T** | **T** | **T** |
| C4: Up Button Pressed | **T** | **F** | **T** | **T** | **F** | **T** | **T** | **F** | **T** |
| C5: Down Button Pressed | **F** | **T** | **T** | **F** | **T** | **T** | **F** | **T** | **T** |
| **Actions** | A1: Car selected randomly | **X** | **X** | **X** |  |  |  |  |  |  |
| A2: Nearest car selected |  |  |  | **X** | **X** | **X** |  |  |  |
| A3: Next car in the list selected |  |  |  |  |  |  | **X** | **X** | **X** |

For each column of the Decision Table, one test case is generated. This ensures that all possible combinations of conditions and their corresponding actions are tested.

##### Floor panel with External Alarm

###### Equivalence partition

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

|  |  |  |
| --- | --- | --- |
| **Input Space** | **Valid Equivalence Partitions** | **Invalid Equivalence Partitions** |
| Floor- UP button | Floor-UP active on all floors except the topmost floor. | Floor-UP button active on the topmost floor. |
| Floor-DOWN button | Floor-DOWN button active on all floors except the lowest floor. | Floor-DOWN button active on the lowest floor. |
| UP/DOWN button color change | Floor UP/DOWN button color change when active | Floor UP/DOWN button color change when inactive |
| Floor indicator updates | Floor indicator get updates when car is moving | Floor indicator does not get updated when car is moving. |
| Up/down button not pressed | Floor panel remains idle, with no color change or no updates | Floor panel is not idle. |

##### Equivalence Partitioning - Test Case Modification Summary

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Component** | **Test Type** | **Test Method** | **# of Test Cases** | | | |
| **Reused** | **Changed** | **Added** | **Deleted** |
| Floor Panel with External Alarm | Black Box | Equivalence Partitioning | 8 | 0 | 2 | 0 |

The Deleted Test cases for Floor Panel with External Alarm Component has been added to the appendix. Graphical Representation for the above details has been provided below:

###### Decision Table: Floor panel

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Conditions** |  | **T1** | **T2** | **T3** | **T4** | **T5** | **T6** | **T7** | **T8** |
| **C1:**Up Button Pressed when car is on top floor. | T | F | F | F | F | F | F | F |
| **C2:** Up button pressed when car is not on top floor | F | T | F | F | F | F | F | F |
| **C3:**DownButton Pressed when car is on bottom floor | F | F | T | F | F | F | F | F |
| **C4:** Down button pressed when car is not on bottom floor | **F** | **F** | **F** | **T** | **F** | **F** | **F** | **F** |
| **C5:** Up button pressed when elevator is moving. | **-** | **-** | **-** | **-** | **T** | **F** | **T** | **-F** |
| **C6:** Down button pressed when elevator is moving. | **-** | **-** | **-** | **-** | **F** | **T** | **T** | **F** |
|  | **C7:** No button pressed. | **F** | **F** | **F** | **F** | **F** | **T** | **F** | **T** |
| **Actions** | **A1:** Button enabled |  | **X** |  | **X** | **X** | **X** | **X** |  |
| **A2**: Button disabled | **X** |  | **X** |  |  |  |  |  |
| **A3:** Button color changed. |  | **X** |  | **X** | **X** | **X** | **X** |  |
| **A4:** Button color not changed. | **X** |  | **X** |  |  |  |  |  |
| **A5:** Request Added to queue. |  | **X** |  | **X** | **X** | **X** | **X** |  |
| **A6:** Floor panel is Idle |  |  |  |  |  |  |  | **X** |
|  | A7: The Floor panel indicator activates. |  | **X** |  | **X** | **X** | **X** | **X** |  |

##### Decision Table - Test Case Modification Summary

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Component** | **Test Type** | **Test Method** | **# of Test Cases** | | | |
| **Reused** | **Changed** | **Added** | **Deleted** |
| Floor Panel with External Alarm | Black Box | Decision Table | 4 | 2 | 2 | 1 |

The Deleted Test cases for User Panel with Internal Alarm Component have been added to the appendix. Graphical Representation for the above details has been provided below:

***Component Re-Test Cases and Test Data***

##### User Panel with Internal Alarm

###### Equivalence Partitioning:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

Based on the partitions and sub partitions highlighted above we have following 14 sub-partitions and we have one test case for each sub-partition.

|  |  |  |  |
| --- | --- | --- | --- |
| **Partition** | **Sub-Partition** | **Test Case ID** | **Output** |
| Show Elevator Button Pressed | Show Elevator Button pressed without selecting any other options | BB-UP-EP-01 | * Interface 2 generated with default Alarm buttons as Text ( ONALARM , OFFALARM ) , default userpanel and default floor panel |
| Show Elevator Button pressed with selected floor numbers , user panel button color, pressed button color options | BB-UP-EP-02 | * Interface 2 generated with selected number of cars, floor numbers, button colors and pressed button color |
| Select Alarm Type | Symbol | BB-UP-EP-03 | * Interface 2 generated with Alarm buttons as Symbols ( ^^ , VV ) , userpanel and floorpanel |
| Text | BB-UP-EP-04 | * Interface 2 generated with Alarm buttons as Text ( ONALARM , OFFALARM ) , userpanel and floor panel |
| User Panel Floor number Buttons pressed | No User Panel button pressed | BB-UP-EP-05 | * No action - no car moves * Car status remains "IDLE" |
| No User panel Floor Number pressed | BB-UP-EP-06 | * No action - car does not move * Car status remains " IDLE" |
| User Panel Floor number buttons pressed without pressing any alarm button | BB-UP-EP-07 | * Car moves to the appropriate floor * Car Status becomes " Moving Up/Down " |
| User Panel Floor number buttons pressed after Alarm On button is pressed | BB-UP-EP-08 | * User Panel floor number buttons are disabled * ONALARM Button Color = Red * OFFALARM Button enabled * Alarm Status on Floor Panel = " Car Stuck" * Car Status is "ALARM\_PRESSED" * Color of alarm status on respective car on Floor Panel is RED |
| User Panel Floor number buttons pressed after Alarm On & Alarm Off button are pressed | BB-UP-EP-09 | * User Panel floor number buttons are enabled * ONALARM Button Color = Green * OFFALARM Button disabled * Alarm Status on Floor Panel = " Car Active" * Car Status is "Car Active" * Color of alarm status on respective car on Floor Panel is Green * Car moves to the respective floor |
| User Panel Floor number buttons pressed before and after Alarm On & Alarm Off button are pressed | BB-UP-EP-10 | * User Panel floor number buttons are enabled * ONALARM Button Color = Green * OFFALARM Button disabled * Alarm Status on Floor Panel = " Car Active" * Car Status is "Car Active" * Color of alarm status on respective car on Floor Panel is Green * Car moves to the respective floor |
| Alarm On Button pressed | Alarm On Button working | BB-UP-EP-11 | * User Panel floor number buttons are disabled * ONALARM Button Color = Red * OFFALARM Button enabled * Alarm Status on Floor Panel = " Car Stuck" * Car Status is "ALARM\_PRESSED" * Color of alarm status on respective car on Floor Panel is RED * Car comes to a stop |
| Alarm Off Button pressed | Alarm Off Button pressed before pressing Alarm On button | BB-UP-EP-12 | * No car should move * Alarm Off button should be disabled |
| Alarm Off Button pressed after pressing Alarm On button | BB-UP-EP-13 | * Alarm On Button color is Green * Car comes to an IDLE mode * Alarm Off Button disabled * User Panel floor number buttons enabled * Car Status becomes "IDLE" * Color of alarm status on respective car on Floor Panel is Green * Alarm Status on Floor Panel = "Car Active" |
| Alarm Off Button pressed after pressing user panel floor number buttons | BB-UP-EP-14 | * Alarm off button should be disabled * No action / effect on car movement and Car keeps on moving up / down |

###### Equivalence partitioning - Test Cases

|  |  |
| --- | --- |
| **Tested Case ID:** BB-UP-EP-01 | **Test Item:** Internal Alarm Component in User Panel |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No: 1.2** |
| **Test case Description:**  Test " Show Elevator " Button without selecting any other option | |
| **Operation procedure:**   1. Press the Show Elevator button without selecting any other option | |
| **Pre-Conditions : None** | **Post Condition: None** |
| **Inputs data and/or events:**   * Press "Show Elevator" Button | **Expected Outputs data and/or events:**   * Interface Elevator Simulation Screen generated with default values of 1 car , 2 floors and an alarm button in the User panel ; default color for user panel and alarm button being Green , default color for pressed buttons being Blue |
| **Required Test Script: None** | |

|  |  |
| --- | --- |
| **Tested Case ID:** BB-UP-EP-02 | **Test Item:** Internal Alarm Component in User Panel |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No: 1.2** |
| **Test case Description:**  Test " Show Elevator " Button with selected options | |
| **Operation procedure:**   1. Press the Show Elevator button | |
| **Pre-Conditions :**  **Number of Floors = blank**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue** | **Post Condition: None** |
| **Inputs data and/or events:**   * Press "Show Elevator" Button | **Expected Outputs data and/or events:**   * Interface Elevator Simulation Screen generated with 3 car , and default number of floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue |
| **Required Test Script: None** | |

|  |  |
| --- | --- |
| **Tested Case ID:** BB-UP-EP-03 | **Test Item:** Internal Alarm Component in User Panel |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No: 1.2** |
| **Test case Description:**  Test Select Alarm Type option for symbol configuration | |
| **Operation procedure:**   1. Select the Alarm Type as Symbol 2. Press the Show Elevator button | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue** | **Post Condition: None** |
| **Inputs data and/or events:**   * Select the Alarm Type as Symbol * Press "Show Elevator" Button | **Expected Outputs data and/or events:**   * Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue * Alarm On button in each car has ( ^^ ) symbol * Alarm Off button in each car has ( vv ) symbol |
| **Required Test Script: None** | |

|  |  |
| --- | --- |
| **Tested Case ID:** BB-UP-EP-04 | **Test Item:** Internal Alarm Component in User Panel |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No: 1.2** |
| **Test case Description:**  Test Select Alarm Type Option for Text Configuration | |
| **Operation procedure:**   1. Select the Alarm Type as Text 2. Press the Show Elevator button | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue** | **Post Condition: None** |
| **Inputs data and/or events:**   * Select the Alarm Type as Text * Press "Show Elevator" Button | **Expected Outputs data and/or events:**   * Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue * Alarm On button in each car has ( ON ALARM ) button * Alarm Off button in each car has ( OFF ALARM ) button |
| **Required Test Script: None** | |

|  |  |
| --- | --- |
| **Tested Case ID:** BB-UP-EP-05 | **Test Item:** Internal Alarm Component in User Panel |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No: 1.2** |
| **Test case Description:**  Test User Panel buttons when no buttons are pressed | |
| **Operation procedure:**   1. Ensure No user panel floor number buttons are pressed 2. Ensure No user panel alarm on or alarm off buttons are pressed | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Press Show Elevator Button | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue |
| **Inputs data and/or events:**   * Ensure No user panel floor number buttons are pressed * Ensure No user panel alarm on or alarm off buttons are pressed | **Expected Outputs data and/or events:**   * No car should move * Car status should remain IDLE |
| **Required Test Script: None** | |

|  |  |
| --- | --- |
| **Tested Case ID:** BB-UP-EP-06 | **Test Item:** Internal Alarm Component in User Panel |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No: 1.2** |
| **Test case Description:**  Test User Panel floor number buttons when no Floor buttons are pressed | |
| **Operation procedure:**   1. Ensure No user panel floor number buttons are pressed | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Press Show Elevator Button | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue |
| **Inputs data and/or events:**   * Ensure No user panel floor number buttons are pressed | **Expected Outputs data and/or events:**   * No car should move * Car status should remain IDLE |
| **Required Test Script: None** | |

|  |  |
| --- | --- |
| **Tested Case ID:** BB-UP-EP-07 | **Test Item:** Internal Alarm Component in User Panel |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No: 1.2** |
| **Test case Description:**  Test User Panel floor number buttons without pressing any alarm buttons | |
| **Operation procedure:**   1. Press User Panel floor number buttons without pressing any alarm buttons | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Press Show Elevator Button | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue |
| **Inputs data and/or events:**   * Press user panel floor number ( 5) for Car 1 | **Expected Outputs data and/or events:**   * Car1 should move to floor number 5 * Car1 status becomes "Moving Up" and once the car reaches the floor it becomes "Stopped" |
| **Required Test Script: None** | |

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| **Tested Case ID:** BB-UP-EP-08 | **Test Item:** Internal Alarm Component in User Panel |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No: 1.2** |
| **Test case Description:**  Test User Panel floor number buttons after pressing Alarm On Button | |
| **Operation procedure:**   1. Press Alarm On button 2. Press User Panel floor number button | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Press Show Elevator Button | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue |
| **Inputs data and/or events:**   * Press Car1 Alarm On button * Press user panel floor number ( 5) for Car 1 | **Expected Outputs data and/or events:**   * User panel floor number buttons should be disabled ( 1-max floor) * Car 1 : ONALARM Button Color = Red * Car 1 : OFFALARM Button enabled * Alarm Status on Floor Panel Floor1 for Car 1 = " Car Stuck" * Car1 Status is "ALARM\_PRESSED" * Color of alarm status on Floor 1 for Car 1 on Floor Panel is RED |
| **Required Test Script: None** | |

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| **Tested Case ID:** BB-UP-EP-09 | **Test Item:** Internal Alarm Component in User Panel |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No: 1.2** |
| **Test case Description:**  Test User Panel floor number buttons after Alarm on and Alarm off buttons have been pressed | |
| **Operation procedure:**   1. Press Alarm On button on Car 2. Press Alarm Off button on Car 3. Press User Panel floor number button | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Press Show Elevator Button | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue |
| **Inputs data and/or events:**   * Press Car1 Alarm On button * Press Car1Alarm Off button * Press user panel floor number ( 5) for Car 1 | **Expected Outputs data and/or events:**   * User panel floor number buttons should be enabled ( 1-max floor) * Car 1 : ONALARM Button Color = Green * Car 1 : OFFALARM Button disabled * Alarm Status on Floor Panel Floor1 for Car 1 = " Car Active" * Car1 Status is "IDLE" * Color of alarm status on Floor 1 for Car 1 on Floor Panel is Green * Car moves to the appropriate floor ( 5) * Color of Pressed floor button becomes Blue |
| **Required Test Script: None** | |

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| **Tested Case ID:** BB-UP-EP-10 | **Test Item:** Internal Alarm Component in User Panel |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No: 1.2** |
| **Test case Description:**  Test User Panel floor number buttons after and before Alarm On and Off buttons are pressed | |
| **Operation procedure:**   1. Press User Panel floor number button 2. Press Alarm On button on Car 3. Press Alarm Off button on Car 4. Press User Panel floor number button | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Press Show Elevator Button | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue |
| **Inputs data and/or events:**   * Press Car 2 user panel floor number (7) button * Press Car2 Alarm On button * Press Car2 Alarm Off button * Press user panel floor number ( 2) for Car 2 | **Expected Outputs data and/or events:**   * User panel floor number buttons should be enabled ( 1-max floor) * Car 2 : ONALARM Button Color = Green * Car 2 : OFFALARM Button disabled * Alarm Status on Floor Panel Floor7 for Car 2 = " Car Active" * Car2 Status is " Moving Down" * Color of alarm status on Floor 7 for Car 2 on Floor Panel is Green * Car moves to the appropriate floor ( 2) * Color of Pressed floor button becomes Blue |
| **Required Test Script: None** | |

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| **Tested Case ID:** BB-UP-EP-11 | **Test Item:** Internal Alarm Component in User Panel |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No: 1.2** |
| **Test case Description:**  Test Alarm On button is working | |
| **Operation procedure:**   1. Press Alarm On button | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Press Show Elevator Button | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue |
| **Inputs data and/or events:**   * Press Car2 Alarm On button | **Expected Outputs data and/or events:**   * User panel floor number buttons should be disabled ( 1-max floor) * Car 2 : ONALARM Button Color = Red * Car 2 : OFFALARM Button enabled * Alarm Status on Floor Panel Floor1 for Car 2 = " Car Stuck" * Car2 Status is "ALARM\_PRESSED" * Color of alarm status on Floor 1 for Car 2 on Floor Panel is RED |
| **Required Test Script: None** | |

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| **Tested Case ID:** BB-UP-EP-12 | **Test Item:** Internal Alarm Component in User Panel |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No: 1.2** |
| **Test case Description:**  Test Alarm Off Button before pressing Alarm On button | |
| **Operation procedure:**   1. Press Alarm Off button before pressing Alarm on Button | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Press Show Elevator Button | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue |
| **Inputs data and/or events:**   * Press Car3 Alarm Off button | **Expected Outputs data and/or events:**   * Alarm Off button for car 3 should be disabled * No car should move |
| **Required Test Script: None** | |

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| **Tested Case ID:** BB-UP-EP-13 | **Test Item:** Internal Alarm Component in User Panel |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No: 1.2** |
| **Test case Description:**  Test Alarm Off button after Alarm On button has been pressed | |
| **Operation procedure:**   1. Press Alarm On button 2. Press Alarm Off button | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Press Show Elevator Button | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue |
| **Inputs data and/or events:**   * Press Car3 Alarm On button * Press Car 3 Alarm Off Button | **Expected Outputs data and/or events:**   * Car3: Alarm On Button color is Green * Car3 comes to an IDLE mode * Car3: Alarm Off Button disabled * Car3: User Panel floor number buttons enabled * Car3: Car Status becomes "IDLE" * Color of alarm status on car3 on Floor Panel floor 1 is Green * Alarm Status on Floor Panel floor 1, car 3 = "Car Active" |
| **Required Test Script: None** | |

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| **Tested Case ID:** BB-UP-EP-14 | **Test Item:** Internal Alarm Component in User Panel |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No: 1.2** |
| **Test case Description:**  Test Alarm Off button after User Panel floor number button has been pressed | |
| **Operation procedure:**   1. Press User Panel floor number button 2. Press Alarm Off button | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Press Show Elevator Button | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue |
| **Inputs data and/or events:**   * Press Car 3 user panel floor number 5 * Press Car 3 Alarm Off Button | **Expected Outputs data and/or events:**   * Alarm off button for car 3 should be disabled * No effect on car movement and Car keeps on moving up |
| **Required Test Script: None** | |

###### Decision Table: Alarm

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| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 | T11 | T12 | T13 | T14 |
| **Conditions:** | **C1:** Floor numbers ( 1- max floor number ) selected on user panel | F | T | T | T | T | T | T | T | T | T | T | T | T | T |
| **C2:** Button Color (Red, Green, Yellow, and Blue) selected. | F | T | F | T | T | T | T | T | T | T | T | T | T | T |
| **C3:** Button Pressed Color same as C2 (Red, Green, Yellow, Blue) | F | F | F | T | T | F | F | F | F | F | F | F | F | F |
| **C4:** Alarm Type selected as Symbol | F | F | F | T | F | T | T | T | T | F | T | T | F | T |
| **C5:** Show Elevator Button Pressed | T | T | T | T | T | T | T | T | T | T | T | T | T | T |
| **C6**: User Panel :Floor Buttons pressed before Alarm buttons are pressed | - | - | T | T | T | T | F | F | T | F | T | T | T | F |
| **C7:** ONALARM Button Pressed | - | - | - | - | - | T | T | T | T | T | T | T | T | T |
| **C8:** OFFALARM Button Pressed after pressing ONALARM button | - | - | - | - | - | F | F | T | T | F | T | F | T | T |
| **C9:** User Panel : Floor numbers are pressed after Alarm buttons are pressed | - | - | - | - | - | F | F | F | T | F | F | T | T | T |
| Actions: | A1: No action | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A2: Car moves to the appropriate floor |  |  | X | X | X |  |  |  | X |  |  |  | X | X |
| A3: Interface 2 generated with Alarm buttons as Symbols ( ^^ , VV ) , userpanel and floorpanel |  |  |  | X |  | X | X | X | X |  | X | X |  | X |
| A4: Interface 2 generated with Alarm buttons as Text ( ONALARM , OFFALARM ) , userpanel and floor panel | X | X | X |  | X |  |  |  |  | X |  |  | X |  |
| A5: ONALARM Button Color = Green |  |  |  |  | X |  |  | X | X |  | X |  | X | X |
| A6: ONALARM Button Color = Red |  |  |  |  |  | X | X |  |  | X |  | X |  |  |
| A7: OFFALARM Button disabled |  |  |  |  | X |  |  | X | X |  | X |  | X | X |
| A8: OFFALARM Button enabled |  |  |  |  |  | X | X |  |  | X |  | X |  |  |
| A9: Alarm Status on Floor Panel = " Car Stuck" |  |  |  |  |  | X | X |  |  | X |  | X |  |  |
| A10: Alarm Status on Floor Panel = "Car Active" |  |  |  |  | X |  |  | X | X |  | X |  | X | X |
| A11: Car comes to a stop or continues to be idle |  |  |  |  |  | X | X |  |  | X |  |  |  |  |
| A12: User Panel floor number buttons disabled |  |  |  |  |  | X | X |  |  | X |  | X |  |  |
| A13: User Panel floor number buttons enabled |  |  |  |  |  |  |  | X | X |  | X |  | X | X |
| A14: Car Status becomes "ALARM\_PRESSED" |  |  |  |  |  | X | X |  |  | X |  | X |  |  |
| A15: Car Status becomes "IDLE" |  |  |  |  |  |  |  | X |  |  | X |  |  |  |
| A16: Color of alarm status on respective car on Floor Panel is GREEN |  |  |  |  |  |  |  | X | X |  | X |  | X | X |
| A17: Color of alarm status on respective car on Floor Panel is RED |  |  |  |  |  | X | X |  |  | X |  | X |  |  |
| A18: Car Status becomes " Moving Up/Down " |  |  |  | X |  |  |  |  | X |  |  |  | X | X |

###### Decision Table - Test Cases

Based on the decision table above we have generated test cases as shown below

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| **Tested Case ID:** BB-UP-DT-01 | **Test Item:** Internal Alarm Component in User Panel |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No: 1.2** |
| **Test case Description:**  Test " Show Elevator " Button without selecting any other option | |
| **Operation procedure:**   1. Press the Show Elevator button without selecting any other option | |
| **Pre-Conditions : None** | **Post Condition: None** |
| **Inputs data and/or events:**   * Press "Show Elevator" Button | **Expected Outputs data and/or events:**   * Interface Elevator Simulation Screen generated with default values of 1 car , 2 floors and an alarm button in the User panel ; default color for user panel and alarm button being Green , default color for pressed buttons being Blue |
| **Required Test Script: None** | |

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| **Tested Case ID:** BB-UP-DT-02 | **Test Item:** Internal Alarm Component in User Panel |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No: 1.2** |
| **Test case Description:**  Test " Show Elevator " Button with selected options | |
| **Operation procedure:**   1. Press Show Elevator button | |
| **Pre-Conditions :**  **Number of Floors = blank**  **Number of cars= blank**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue** | **Post Condition: None** |
| **Inputs data and/or events:**   * Press Show Elevator button | **Expected Outputs data and/or events:**   * Interface Elevator Simulation Screen generated with 3 car , and default number of floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue * Alarm button has Text content ( ONALARM , OFFALARM ) |
| **Required Test Script: None** | |

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| **Tested Case ID:** BB-UP-DT-03 | **Test Item:** Internal Alarm Component in User Panel | |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 | |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** | |
| **Product Name:** Elevator System | **Release and Version No: 1.2** | |
| **Test case Description:**  Test "User Panel Floor number" buttons with just Floor number selected | | |
| **Operation procedure:**   1. Select the Floor Number 2. Select Show Elevator Button 3. Press the user panel floor number buttons | | |
| **Pre-Conditions :**  **Number of Floors = 7** | | **Post Condition: None**  Interface Elevator Simulation Screen generated with 1 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue  Alarm text on buttons is ONALARM and OFFALARM |
| **Inputs data and/or events:**   * Press floor number buttons on user panel without pressing any alarm button | | **Expected Outputs data and/or events:**   * Interface 2 generated with user panel buttons in Green and pressed button as Blue * Alarm text on buttons is ONALARM and OFFALARM * Car moves to appropriate floor |
| **Required Test Script: None** | | |

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| **Tested Case ID:** BB-UP-DT-04 | **Test Item:** Internal Alarm Component in User Panel | |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 | |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** | |
| **Product Name:** Elevator System | **Release and Version No: 1.2** | |
| **Test case Description:**  Test "User Panel Floor number" buttons with Alarm Configuration chosen as symbol | | |
| **Operation procedure:**   1. Press floor number buttons on user panel without pressing any alarm button | | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue** | | **Post Condition: None**  Interface with user panel, floor panel and the alarm buttons.  Color of alarm button and user panel button is green  Alarm symbols on buttons |
| **Inputs data and/or events:**   * Select Alarm Type as Symbol * Select Show Elevator Button * Press the user panel floor number buttons | | **Expected Outputs data and/or events:**   * Car status changes to moving up / down * Car moves to appropriate floor |
| **Required Test Script: None** | | |

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| **Tested Case ID:** BB-UP-DT-05 | **Test Item:** Internal Alarm Component in User Panel | |
| **Written By: Deepshikha Koul** | **Documented Date:** 10/13/2011 | |
| **Test Type:** Black Box Testing | **Test Suite #: 1.2** | |
| **Product Name:** Elevator System | **Release and Version No: 1.2** | |
| **Test case Description:**  Test "User Panel Floor number" buttons with Alarm Configuration chosen as Text | | |
| **Operation procedure:**   1. Select Alarm Type as Text 2. Select Show Elevator Button 3. Press the user panel floor number buttons | | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue** | | **Post Condition: None**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue  Alarm text on buttons is ONALARM and OFFALARM |
| **Inputs data and/or events:**   * Press floor number buttons on user panel without pressing any alarm button | | **Expected Outputs data and/or events:**   * Alarm text on buttons is ONALARM and OFFALARM * Car status changes to moving up / down * Car moves to appropriate floor |
| **Required Test Script: None** | | |

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| **Tested Case ID: BB-UP-DT-06** | **Test Item: Internal Alarm Component in User Panel** | |
| **Written By: Deepshikha Koul** | **Documented Date: 10/13/2011** | |
| **Test Type: Black Box Testing** | **Test Suite #: 1.2** | |
| **Product Name: Elevator System** | **Release and Version No: 1.2** | |
| **Test case Description:**  Test "Alarm On" buttons in Alarm Type - Symbol Configuration after pressing the User Panel: Floor Buttons | | |
| **Operation procedure:**   1. Press floor number buttons on user panel 2. Press the alarm on button (^^) | | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Select the Alarm type as Symbol  Press Show Elevator button | | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue  Alarm Buttons have symbol representation Alarm On (^^)  Alarm Off ( vv) |
| **Inputs data and/or events:**   * Press the user panel floor number button for Floor 5 * Press the alarm on symbol (^^) on Car 3 | | **Expected Outputs data and/or events:**   * Car 3: Alarm ON button ( ^^) color is red * Car 3: Alarm OFF button (vv) is enabled * Alarm status on Floor panel for car 3 on floor 5 is " Car Stuck" * Car 3: User Panel Floor number buttons are disabled * Car 3comes to a stop * Car 3 Status becomes " Alarm\_Pressed" * Color of alarm status on car3 on floor 5 becomes red |
| **Required Test Script: None** | | |

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| **Tested Case ID: BB-UP-DT-07** | **Test Item: Internal Alarm Component in User Panel** | |
| **Written By: Deepshikha Koul** | **Documented Date: 10/13/2011** | |
| **Test Type: Black Box Testing** | **Test Suite #: 1.2** | |
| **Product Name: Elevator System** | **Release and Version No: 1.2** | |
| **Test case Description:**  Test "Alarm On" buttons in Alarm Type - Symbol Configuration | | |
| **Operation procedure:**   1. Press the alarm On button ( ^^) | | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Select the Alarm type as Symbol  Press Show Elevator button | | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue  Alarm Buttons have symbol representation Alarm On (^^)  Alarm Off ( vv) |
| **Inputs data and/or events:**   * Press the alarm on symbol (^^) for Car 2 | | **Expected Outputs data and/or events:**   * Car2: Alarm ON button ( ^^) color is red * Car2: Alarm OFF button (vv) is enabled * Car2: Alarm status on Floor panel floor 1 is " Car Stuck" * Car2: User Panel Floor number buttons are disabled * Car2 continues to be in idle mode * Car2 Status becomes " Alarm\_Pressed" * Color of alarm status on car2 floor 1 becomes red |
| **Required Test Script: None** | | |

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| **Tested Case ID: BB-UP-DT-08** | **Test Item: Internal Alarm Component in User Panel** | |
| **Written By: Deepshikha Koul** | **Documented Date: 10/13/2011** | |
| **Test Type: Black Box Testing** | **Test Suite #: 1.2** | |
| **Product Name: Elevator System** | **Release and Version No: 1.2** | |
| **Test case Description:**  Testing "AlarmOff" button after pressing Alarm On button | | |
| **Operation procedure:**   1. Press the alarm On button ( ^^) 2. Press the alarm Off button (vv) | | |
| **Pre Condition**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Select the Alarm type as Symbol  Press Show Elevator button | | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue  Alarm Buttons have symbol representation (^^)(vv) |
| **Inputs data and/or events:**   * Press the alarm on symbol (^^) on Car 2 * Press the alarm off sysmbol (vv) on Car 2 | | **Expected Outputs data and/or events:**   * Car2: Alarm ON button ( ^^) color is green * Car2: Alarm OFF button (vv) is disabled * Car2: Alarm status on Floor panel is " Car Active" * Car2: User Panel Floor number buttons are enabled * Car2 Status becomes " IDLE" * Color of alarm status on car 2 on floor 1 becomes Green |
| **Required Test Script: None** | | |

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| **Tested Case ID: BB-UP-DT-09** | **Test Item: Internal Alarm Component in User Panel** | |
| **Written By: Deepshikha Koul** | **Documented Date: 10/13/2011** | |
| **Test Type: Black Box Testing** | **Test Suite #: 1.2** | |
| **Product Name: Elevator System** | **Release and Version No: 1.2** | |
| **Test case Description:**  Testing User panel floor number Buttons pressed after Alarm On , Alarm Off buttons and user panel floor number buttons are pressed | | |
| **Operation procedure:**   1. Press the user panel floor number buttons 2. Press the alarm On button ( ^^) 3. Press the alarm Off button (vv) 4. Press the user panel floor number buttons | | |
| **Pre Condition**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Select the Alarm type as Symbol  Press Show Elevator button | | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue  Alarm Buttons have symbol representation (^^)(vv) |
| **Inputs data and/or events:**   * Press the user panel floor number button ( 1) for car 2 * Press the alarm on symbol (^^) on car 2 user panel * Press the alarm off symbol (vv) on car 2 user panel * Press the user panel floor number button ( 5) | | **Expected Outputs data and/or events:**   * Alarm ON button ( ^^) color is green * Car 2: Alarm OFF button (vv) is disabled * Car 2 Alarm status on Floor panel floor 1 is " Car Active" * User Panel Floor number buttons on car 2 are enabled * Car2 Status becomes "Moving up / down" * Color of alarm status on respective car on specific floor becomes Green * Car moves to the appropriate floor ( 5) |
| **Required Test Script: None** | | |

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| **Tested Case ID: BB-UP-DT-10** | **Test Item: Internal Alarm Component in User Panel** | |
| **Written By: Deepshikha Koul** | **Documented Date: 10/13/2011** | |
| **Test Type: Black Box Testing** | **Test Suite #: 1.2** | |
| **Product Name: Elevator System** | **Release and Version No: 1.2** | |
| **Test case Description:**  Test " Alarm On" button for alarm configuration selected as Text | | |
| **Operation procedure:**   1. Press the alarm On button ( ON ALARM) | | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Select the Alarm type as Text  Press Show Elevator button | | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue  Alarm Buttons have Text representation ( ONALARM , OFFALARM ) |
| **Inputs data and/or events:**   * Press the alarm on button ( ONALARM) for Car 1 | | **Expected Outputs data and/or events:**   * Car 1: Alarm ON button ( ONALARM) color is red * Car 1: Alarm OFF button (OFFALARM) is enabled * Car 1: Alarm status on Floor panel floor 1 is " Car Stuck" * Car 1: User Panel Floor number buttons are disabled * Car1 comes to be in stop * Car1 Status becomes "Alarm\_Pressed" * Color of alarm status for Car1 on floor 1 becomes red |
| **Required Test Script: None** | | |

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| **Tested Case ID: BB-UP-DT-11** | **Test Item: Internal Alarm Component in User Panel** | |
| **Written By: Deepshikha Koul** | **Documented Date: 10/13/2011** | |
| **Test Type: Black Box Testing** | **Test Suite #: 1.2** | |
| **Product Name: Elevator System** | **Release and Version No: 1.2** | |
| **Test case Description:**  **Test Alarm off button after pressing alarm on and user panel floor number buttons** | | |
| **Operation procedure:**   1. Press the user panel floor number buttons 2. Press the alarm On button ( ^^) 3. Press the alarm Off button (vv) | | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Select the Alarm type as Symbol  Press Show Elevator button | | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue  Alarm Buttons have symbol representation  Alarm On ( ^^ )  Alarm Off ( vv) |
| **Inputs data and/or events:**   * Press the user panel floor number button ( 7) for Car 1 * Press the alarm on symbol (^^) for car 1 * Press the alarm off symbol (vv) for car 1 | | **Expected Outputs data and/or events:**   * Car 1: Alarm ON button ( ^^) color is green * Car 1: Alarm OFF button (vv) is disabled * Car 1: Alarm status on Floor panel for floor 7 is " Car Active" * Car 1: User Panel Floor number buttons are enabled * Car 1 Status becomes "IDLE" * Color of alarm status on Floor 7 and Car 1 becomes Green |
| **Required Test Script: None** | | |

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| **Tested Case ID: BB-UP-DT-12** | **Test Item: Internal Alarm Component in User Panel** | |
| **Written By: Deepshikha Koul** | **Documented Date: 10/13/2011** | |
| **Test Type: Black Box Testing** | **Test Suite #: 1.2** | |
| **Product Name: Elevator System** | **Release and Version No: 1.2** | |
| **Test case Description:**  Testing User panel floor number buttons after pressing user panel floor number and alarm on button | | |
| **Operation procedure:**   1. Press the user panel floor number buttons 2. Press the alarm On button ( ^^) 3. Press the user panel floor number buttons | | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Select the Alarm type as Symbol  Press Show Elevator button | | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue  Alarm Buttons have symbol representation  Alarm On ( ^^ )  Alarm Off ( vv) |
| **Inputs data and/or events:**   * Press the user panel floor number button ( 5) for car 1 * Press the alarm on symbol (^^) for car 1 * Press the user panel floor number buttons for Car 1 | | **Expected Outputs data and/or events:**   * Car 1: Alarm ON button ( ^^) color is Red * Car 1: Alarm OFF button (vv) is enabled * Car 1: Alarm status on Floor panel floor 5 is " Car Stuck" * Car 1: User Panel Floor number buttons are disabled * Car1 Status becomes "ALARM\_PRESSED" * Color of alarm status on Car 1 and floor 5 becomes RED |
| **Required Test Script: None** | | |

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| **Tested Case ID: BB-UP-DT-13** | **Test Item: Internal Alarm Component in User Panel** | |
| **Written By: Deepshikha Koul** | **Documented Date: 10/13/2011** | |
| **Test Type: Black Box Testing** | **Test Suite #: 1.2** | |
| **Product Name: Elevator System** | **Release and Version No: 1.2** | |
| **Test case Description:**  Test User Panel Floor number buttons after pressing User panel floor numbers ,Alarm on and Alarm off buttons for Alarm configuration - Text | | |
| **Operation procedure:**   1. Press the user panel floor number buttons 2. Press the alarm On button ( ^^) 3. Press the alarm Off button (vv) 4. Press the user panel floor number buttons | | |
| **Pre-Conditions :**  **Number of Floors = 7**  **Number of cars=3**  **User Panel Color = Green**  **User Panel Pressed Button Color = Blue**  Select the Alarm type as Text  Press Show Elevator button | | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue  Alarm Buttons have Text representation  ONALARM , OFFALARM |
| **Inputs data and/or events:**   * Press the user panel floor number buttons (2) for car 1 * Press the alarm on symbol (ONALARM) on Car 1 user panel * Press the alarm off symbol (OFFALARM) on car 1 user panel * Press the user panel floor number buttons(7) | | **Expected Outputs data and/or events:**   * Car 1: Alarm ON button ( ^^) color is green * Car 1: Alarm OFF button (vv) is disabled * Car 1: Alarm status on Floor panel floor 2 is " Car Active" * Car 1: User Panel Floor number buttons are enabled * Car 1 Status becomes "Moving up/down" * Color of alarm status on floor 2 and car 1 becomes Green * Car moves to the appropriate floor(7) |
| **Required Test Script: None** | | |

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| **Tested Case ID: BB-UP-DT-14** | **Test Item: Internal Alarm Component in User Panel** | |
| **Written By: Deepshikha Koul** | **Documented Date: 10/13/2011** | |
| **Test Type: Black Box Testing** | **Test Suite #: 1.2** | |
| **Product Name: Elevator System** | **Release and Version No: 1.2** | |
| **Test case Description:**  Test User Panel floor number buttons after pressing Alarm On and Alarm Off buttons for alarm type configuration as symbol | | |
| **Operation procedure:**   1. Press the alarm On button ( ^^) 2. Press the alarm Off button (vv) 3. Press the user panel floor number buttons | | |
| **Pre-Conditions :**  Number of Floors = 7  Number of cars=3  User Panel Color = Green  User Panel Pressed Button Color = Blue  Select the Alarm type as symbol  Press Show Elevator button | | **Post Condition:**  Interface Elevator Simulation Screen generated with 3 car , 7 floors and alarm buttons in the User panel ; color for user panel and alarm button being Green , color for pressed buttons being Blue  Alarm Buttons have Symbol representation  Alarm On ( ^^)  Alarm Off (vv) |
| **Inputs data and/or events:**   * Press the alarm on symbol (^^) for car 3 * Press the alarm off symbol (vv) for car 3 * Press the user panel floor number buttons( 7) for car 3 | | **Expected Outputs data and/or events:**   * Car 3: Alarm ON button ( ^^) color is green * Car 3: Alarm OFF button (vv) is disabled * Car 3 Alarm status on Floor panel is " Car Active" * Car 3 User Panel Floor number buttons are enabled * Car3 Status becomes "Moving up/down" * Color of alarm status on car 3 floor 7 is Green * Car moves to the appropriate floor (7) |
| **Required Test Script: None** | | |

##### 

##### Algorithm

###### Equivalence partitioning

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| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

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| **Algorithm** | **Partition** | **Test Case ID** | **Output** |
| Least Recently Used | None of the cars are used | BB-AL-EP-01 | 1st car is selected |
| Cars less than the total number of cars are used | BB-AL-EP-02 | The IDLE car is selected |
| All the cars are used | BB-AL-EP-03 | Least recently used car is selected |
| Shortest Path | None of the cars are used | BB-AL-EP-04 | First car is used |
| Cars less than the total number of cars are used | BB-AL-EP-05 | Car in IDLE state is used |
| All the cars are used, floor panel button pressed on floor above the floor in which car is at present | BB-AL-EP-06 | The car closest to the floor in which button is pressed is used |
| All the cars are used, floor panel button pressed on floor below the floor in which car is at present | BB-AL-EP-07 | The car closest to the floor in which button is pressed is used |
| Random | None of the cars are used | BB-AL-EP-08 | Car selection is random |
| Cars less than the total number of cars are used | BB-AL-EP-09 | Car selection is random |
| All the cars are used | BB-AL-EP-10 | Car selection is random |

###### Equivalence partitioning - Test Cases

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| --- | --- |
| **Test Case ID:** BB –AL-EP-01 | **Test Item:** Elevator Algorithm |
| **Written By:** Bindiya Thomas | **Documented Date:** 10/12/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Testing the Least recently used elevator algorithm | |
| **Operation procedure:**   1. Select Algorithm Type as ‘Least Recently Used’ from the GUI. 2. Press button on floor panel | |
| **Pre-conditions:** None of the cars are being used | **Post-conditions:** One car is selected |
| **Inputs data and/or events:**  Press the floor panel UP/DOWN button | **Expected output data and/or events:**  The first car is selected. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** BB –AL-EP-02 | **Test Item:** Elevator Algorithm |
| **Written By:** Bindiya Thomas | **Documented Date:** 10/12/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Testing the Least recently used elevator algorithm | |
| **Operation procedure:**   1. Select Algorithm Type as ‘Least Recently Used’ from the GUI. 2. Press button on floor panel | |
| **Pre-conditions: Cars less than the total number of available cars are being used** | **Post-conditions: One car is selected** |
| **Inputs data and/or events:**  Press the floor panel UP/DOWN button | **Expected output data and/or events:**  The car in IDLE state is selected |
| **Required test scripts: -** None |  |

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| **Test Case ID:** BB –AL-EP-03 | **Test Item:** Elevator Algorithm |
| **Written By:** Bindiya Thomas | **Documented Date:** 10/12/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Testing the Least recently used elevator algorithm | |
| **Operation procedure:**   1. Select Algorithm Type as ‘Least Recently Used’ from the GUI. 2. Press button on floor panel | |
| **Pre-conditions:** All the cars are being used | **Post-conditions:** One car is selected |
| **Inputs data and/or events:**  Press the floor panel UP/DOWN button | **Expected output data and/or events:**  The car which is least recently used is selected |
| **Required test scripts: -** None |  |
| **Test Case ID: BB –AL-EP-04** | **Test Item: Elevator Algorithm** |
| **Written By: Bindiya Thomas** | **Documented Date: 10/12/2011** |
| **Test Type: Black Box Testing** | **Test Suite#: 1.2** |
| **Product Name: Elevator System** | **Release and Version No.: 1.2** |
| **Test case description:** Testing the Shortest Path elevator algorithm | |
| **Operation procedure:**   1. Select Algorithm Type as ‘Shortest Path’ from the GUI. 2. Press button on floor panel | |
| **Pre-conditions:** No car is being used | **Post-conditions:** One car is selected |
| **Inputs data and/or events:**  Press the floor panel UP/DOWN button | **Expected output data and/or events:**  The first car in IDLE state is selected |
| **Required test scripts: -** None |  |

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| **Test Case ID: BB –AL-EP-05** | **Test Item: Elevator Algorithm** |
| **Written By: Bindiya Thomas** | **Documented Date: 10/12/2011** |
| **Test Type: Black Box Testing** | **Test Suite#: 1.2** |
| **Product Name: Elevator System** | **Release and Version No.: 1.2** |
| **Test case description:** Testing the Shortest Path elevator algorithm | |
| **Operation procedure:**   1. Select Algorithm Type as ‘Shortest Path’ from the GUI. 2. Press button on floor panel | |
| **Pre-conditions:** Cars less than the total number of cars is being used | **Post-conditions:** One car is selected |
| **Inputs data and/or events:**  Press the floor panel UP/DOWN button | **Expected output data and/or events:**  The first car in IDLE state is selected |
| **Required test scripts: -** None |  |

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| **Test Case ID: BB –AL-EP-06** | **Test Item: Elevator Algorithm** |
| **Written By: Bindiya Thomas** | **Documented Date: 10/12/2011** |
| **Test Type: Black Box Testing** | **Test Suite#: 1.2** |
| **Product Name: Elevator System** | **Release and Version No.: 1.2** |
| **Test case description:** Testing the Shortest Path elevator algorithm | |
| **Operation procedure:**   1. Select Algorithm Type as ‘Shortest Path’ from the GUI. 2. Press button on floor panel | |
| **Pre-conditions:** All the cars are being used | **Post-conditions:** One car is selected |
| **Inputs data and/or events:**  Press the floor panel UP/DOWN button on floor which is above the floor in which car is at present | **Expected output data and/or events:**  The car moves to the top floor |
| **Required test scripts: -** None |  |

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| **Test Case ID: BB –AL-EP-07** | **Test Item: Elevator Algorithm** |
| **Written By: Bindiya Thomas** | **Documented Date: 10/12/2011** |
| **Test Type: Black Box Testing** | **Test Suite#: 1.2** |
| **Product Name: Elevator System** | **Release and Version No.: 1.2** |
| **Test case description:** Testing the Shortest Path elevator algorithm | |
| **Operation procedure:**   1. Select Algorithm Type as ‘Shortest Path’ from the GUI. 2. Press button on floor panel | |
| **Pre-conditions:** All the cars are being used | **Post-conditions:** One car is selected |
| **Inputs data and/or events:**  Press the floor panel UP/DOWN button on floor below the floor in which car is at present | **Expected output data and/or events:**  The car moves to the floor below it. |
| **Required test scripts: -** None |  |

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| **Test Case ID: BB –AL-EP-08** | **Test Item: Elevator Algorithm** |
| **Written By: Bindiya Thomas** | **Documented Date: 10/12/2011** |
| **Test Type: Black Box Testing** | **Test Suite#: 1.2** |
| **Product Name: Elevator System** | **Release and Version No.: 1.2** |
| **Test case description:** Testing the Random elevator algorithm | |
| **Operation procedure:**   1. Select Algorithm Type as ‘Random from the GUI. 2. Press button on floor panel | |
| **Pre-conditions:** None of the cars are used | **Post-conditions:** One car is selected |
| **Inputs data and/or events:**  Press the floor panel UP/DOWN button | **Expected output data and/or events:**  Any random car is selected |
| **Required test scripts: -** None |  |

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| **Test Case ID: BB –AL-EP-09** | **Test Item: Elevator Algorithm** |
| **Written By: Bindiya Thomas** | **Documented Date: 10/12/2011** |
| **Test Type: Black Box Testing** | **Test Suite#: 1.2** |
| **Product Name: Elevator System** | **Release and Version No.: 1.2** |
| **Test case description:** Testing the Random elevator algorithm | |
| **Operation procedure:**   1. Select Algorithm Type as ‘Random from the GUI. 2. Press button on floor panel | |
| **Pre-conditions:** Cars less than the total number of cars are being used | **Post-conditions:** One car is selected |
| **Inputs data and/or events:**  Press the floor panel UP/DOWN button | **Expected output data and/or events:**  Any random car is selected |
| **Required test scripts: -** None |  |

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| **Test Case ID: BB –AL-EP-10** | **Test Item: Elevator Algorithm** |
| **Written By: Bindiya Thomas** | **Documented Date: 10/12/2011** |
| **Test Type: Black Box Testing** | **Test Suite#: 1.2** |
| **Product Name: Elevator System** | **Release and Version No.: 1.2** |
| **Test case description:** Testing the Random elevator algorithm | |
| **Operation procedure:**   1. Select Algorithm Type as ‘Random from the GUI 2. Press button on floor panel | |
| **Pre-conditions:** All the cars are used | **Post-conditions:** One car is selected |
| **Inputs data and/or events:**  Press the floor panel UP/DOWN button | **Expected output data and/or events:**  Any random car is selected |
| **Required test scripts: -** None |  |

###### Decision Table Based Testing

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| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

*Note: Since this part of the testing was not done in the previous version, all test cases are new.*

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|  |  | **T1** | **T2** | **T3** | **T4** | **T5** | **T6** | **T7** | **T8** | **T9** |
| **Conditions** | C1: Random Algorithm selected from Admin Console | **T** | **T** | **T** | **F** | **F** | **F** | **F** | **F** | **F** |
| C2: Shortest Path algorithm selected from Admin console | **F** | **F** | **F** | **T** | **T** | **T** | **F** | **F** | **F** |
| C3: Least Recently used algorithm selected from Admin Console | **F** | **F** | **F** | **F** | **F** | **F** | **T** | **T** | **T** |
| C4: Up Button Pressed | **T** | **F** | **T** | **T** | **F** | **T** | **T** | **F** | **T** |
| C5: Down Button Pressed | **F** | **T** | **T** | **F** | **T** | **T** | **F** | **T** | **T** |
| **Actions** | A1: Car selected randomly | **X** | **X** | **X** |  |  |  |  |  |  |
| A2: Nearest car selected |  |  |  | **X** | **X** | **X** |  |  |  |
| A3: Next car in the list selected |  |  |  |  |  |  | **X** | **X** | **X** |

The following Black box Test Cases and corresponding test data are generated using Decision based table. We have generated all new test cases as none existed for testing the Algorithm.

###### Decision table based testing - Algorithm test cases

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| --- | --- |
| **Test Case ID:** BB-AL-DT-01 | **Test Item:** Algorithm Component |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/19/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Check car selection using Random Algorithm when Up button is pressed. | |
| **Operation Procedure:**   1. Select Algorithm type as “Random Algorithm” from Admin Console. 2. Click “Up’ button for any floor on the Floor Panel. | |
| **Pre-Conditions :**  **Number of Floors:** 5  **Number of Cars:** 3  **Door Configuration:** Single  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Blue  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Random  **Alarm Type:** Text    Click the “Show Elevator” Button | **Post Condition:**  Car selected. |
| **Specifications:** | |
| **Input:** “Up” button pressed on Floor 2. | **Expected Output:** Any Car selected randomly. |
| **Required Test Script:**  - | |

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| --- | --- |
| **Test Case ID:** BB-AL-DT-02 | **Test Item:** Algorithm Component |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/19/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Check car selection using Random Algorithm when Down button is pressed. | |
| **Operation Procedure:**   1. Select Algorithm type as “Random Algorithm” from Admin Console. 2. Click “Down’ button for any floor on the Floor Panel. | |
| **Pre-Conditions :**  **Number of Floors:** 5  **Number of Cars:** 3  **Door Configuration:** Single  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Blue  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Random  **Alarm Type:** Text    Click the “Show Elevator” Button | **Post Condition:**  Car selected. |
| **Specifications:** | |
| **Input:** “Down” button pressed on Floor 2. | **Expected Output:** Any Car selected randomly. |
| **Required Test Script:**  - | |

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| --- | --- |
| **Test Case ID:** BB-AL-DT-03 | **Test Item:** Algorithm Component |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/19/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Check car selection using Random Algorithm when Up button is pressed first and then the Down button is pressed. | |
| **Operation Procedure:**   1. Select Algorithm type as “Random Algorithm” from Admin Console and click on “Show Elevator”. 2. Click “Up’ button for any floor on the Floor Panel. 3. Then click “Down” button on any floor. | |
| **Pre-Conditions :**  **Number of Floors:** 5  **Number of Cars:** 3  **Door Configuration:** Single  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Blue  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Random  **Alarm Type:** Text    Click the “Show Elevator” Button | **Post Condition:**  Car selected. |
| **Specifications:** | |
| **Input:** “Up” button pressed on Floor 2 and then “Down” button pressed on Floor 3 | **Expected Output:** Any Car selected randomly. |
| **Required Test Script:**  - | |

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| --- | --- |
| **Test Case ID:** BB-AL-DT-04 | **Test Item:** Algorithm Component |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/19/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Check car selection using Shortest Path Algorithm when Up button is pressed. | |
| **Operation Procedure:**   1. Select Algorithm type as “Shortest Path” from Admin Console. 2. Click “Up’ button for any floor on the Floor Panel. | |
| **Pre-Conditions :**  **Number of Floors:** 5  **Number of Cars:** 3  **Door Configuration:** Single  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Blue  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **Alarm Type:** Text    Click the “Show Elevator” Button | **Post Condition:**  Car selected. |
| **Specifications:** | |
| **Input:** “Up” button pressed on Floor 2. | **Expected Output:** Car #1 selected. |
| **Required Test Script:**  - | |

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| --- | --- |
| **Test Case ID:** BB-AL-DT-05 | **Test Item:** Algorithm Component |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/19/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Check car selection using Shortest Path Algorithm when Down button is pressed. | |
| **Operation Procedure:**   1. Select Algorithm type as “Shortest Path” from Admin Console. 2. Click “Down” button for any floor on the Floor Panel. | |
| **Pre-Conditions :**  **Number of Floors:** 5  **Number of Cars:** 3  **Door Configuration:** Single  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Blue  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **Alarm Type:** Text    Click the “Show Elevator” Button | **Post Condition:**  Car selected. |
| **Specifications:** | |
| **Input:** “Down” button pressed on Floor 2. | **Expected Output:** Car #1 selected. |
| **Required Test Script:**  - | |

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| --- | --- |
| **Test Case ID:** BB-AL-DT-06 | **Test Item:** Algorithm Component |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/19/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Check car selection using Shortest Path Algorithm when Up button is pressed first and then the Down button is pressed. | |
| **Operation Procedure:**   1. Select Algorithm type as “Shortest Path” from Admin Console and click on “Show Elevator”. 2. Click “Up’ button for any floor on the Floor Panel. 3. Then click “Down” button on any floor. | |
| **Pre-Conditions :**  **Number of Floors:** 5  **Number of Cars:** 3  **Door Configuration:** Single  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Blue  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Random  **Alarm Type:** Text    Click the “Show Elevator” Button | **Post Condition:**  Car selected. |
| **Specifications:** | |
| **Input:** “Up” button pressed on Floor 8 and then “Down” button pressed on Floor 2 | **Expected Output:** Car#1 selected for first request and then Car#2 selected. |
| **Required Test Script:**  - | |

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| **Test Case ID:** BB-AL-DT-07 | **Test Item:** Algorithm Component |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/19/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Check car selection using Least Recently Used Algorithm when Up button is pressed. | |
| **Operation Procedure:**   1. Select Algorithm type as “Least Recently Used” from Admin Console. 2. Click “Up’ button for any floor on the Floor Panel. | |
| **Pre-Conditions :**  **Number of Floors:** 5  **Number of Cars:** 3  **Door Configuration:** Single  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Blue  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Least Recently Used  **Alarm Type:** Text    Click the “Show Elevator” Button | **Post Condition:**  Car selected. |
| **Specifications:** | |
| **Input:** “Up” button pressed on Floor 2. | **Expected Output:** Car #1 selected. |
| **Required Test Script:**  - | |

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| --- | --- |
| **Test Case ID:** BB-AL-DT-08 | **Test Item:** Algorithm Component |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/19/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Check car selection using Least Recently Used Algorithm when Up button is pressed. | |
| **Operation Procedure:**   1. Select Algorithm type as “Least Recently Used” from Admin Console. 2. Click “Down’ button for any floor on the Floor Panel. | |
| **Pre-Conditions :**  **Number of Floors:** 5  **Number of Cars:** 3  **Door Configuration:** Single  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Blue  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Least Recently Used  **Alarm Type:** Text    Click the “Show Elevator” Button | **Post Condition:**  Car selected. |
| **Specifications:** | |
| **Input:** “Down” button pressed on Floor 2. | **Expected Output:** Car #2 selected. |
| **Required Test Script:**  - | |

|  |  |
| --- | --- |
| **Test Case ID:** BB-AL-DT-09 | **Test Item:** Algorithm Component |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/19/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Check car selection using Least Recently Used Algorithm when Up button is pressed first and then the Down button is pressed. | |
| **Operation Procedure:**   1. Select Algorithm type as “Least Recently Used” from Admin Console. 2. Click “Up’ button for any floor on the Floor Panel. 3. Then click Down button | |
| **Pre-Conditions :**  **Number of Floors:** 5  **Number of Cars:** 3  **Door Configuration:** Single  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Blue  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Least Recently Used  **Alarm Type:** Text    Click the “Show Elevator” Button | **Post Condition:**  Car selected. |
| **Specifications:** | |
| **Input:** “Up” button pressed on Floor 2 and then “Down” button pressed on Floor 8. | **Expected Output:** Car #1 selected for first request and then Car #2 selected for next request. |
| **Required Test Script:**  - | |

##### Floor panel with External Alarm:

###### Equivalence partitioning

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

|  |  |  |
| --- | --- | --- |
| **Input Space** | **Valid Equivalence Partitions** | **Invalid Equivalence Partitions** |
| Floor- UP button | Floor-UP active on all floors except the topmost floor. | Floor-UP button active on the topmost floor. |
| Floor-DOWN button | Floor-DOWN button active on all floors except the lowest floor. | Floor-DOWN button active on the lowest floor. |
| UP/DOWN button color change | Floor UP/DOWN button color change when active | Floor UP/DOWN button color change when inactive |
| Floor indicator updates | Floor indicator get updates when car is moving | Floor indicator does not get updated when car is moving. |
| Up/down button not pressed | Floor panel remains idle, with no color change or no updates | Floor panel is not idle. |

###### Equivalence partitioning – Test cases

|  |  |
| --- | --- |
| **Test Case ID:** BB-FP-EP-01 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 24/10/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description:** Test “UP” button of the top most floor of the floor panel. | |
| **Operation procedure:**   1. Press the “UP” button of the top most floor. | |
| **Pre-conditions:**  Elevator car is on the top most floor. | **Post-conditions:**  Floor UP button is inactive. |
| **Inputs data and/or events:**  1. Elevator car is on the top most floor 2.floorRequest is made to move upwards. | **Expected output data and/or events:**  Floor UP button is not available on topmost floor. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** BB-FP-EP-02 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 24/10/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description:** Test “DOWN” button on lowest floor of the floor panel. | |
| **Operation procedure:**   1. Press the “DOWN” button of the bottom floor. | |
| **Pre-conditions:**  Elevator car is on the lowest floor. | **Post-conditions:**  Floor DOWN button is inactive. |
| **Inputs data and/or events:**  1. Elevator car is on the lowest floor  2.Request made to move down | **Expected output data and/or events:**  On lowest Floor DOWN button is not available. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** BB-FP-EP-03 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 24/10/2011 |
| **Test Type:** Black Box Testing | **Test Suite**#: 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description:** Test “UP” button on the floor panel | |
| **Operation procedure:**   1. Press the “UP” button on the lowest floor. | |
| **Pre-conditions:**  Elevator car is on the lowest floor. | **Post-conditions:**  Floor UP button is active on the lowest floor. |
| **Inputs data and/or events:**   1. Elevator car is on the lowest floor. 2. Up button is pressed | **Expected output data and/or events:**  Floor UP button is available. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** BB-FP-EP-04 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 24/10/2011 |
| **Test Type:** Black Box Testing | **Test Suite**#: 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description:** Test “Down” button on the floor panel | |
| **Operation procedure:**   1. Press the “Down” button of the floor panel on the top most floor. | |
| **Pre-conditions:**  Elevator car is on the top most. | **Post-conditions:**  Floor Down button is active on that floor |
| **Inputs data and/or events:**   1. Elevator car is on the top most floor. 2. Down button is pressed | **Expected output data and/or events:**  Floor Down button is available on the top most floor. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** BB-FP-EP-05 | **Test Item:** Floor Panel with floor indicator. |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 24/10/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No**.: 1.2 |
| **Test case description:** Test “UP” and “DOWN” buttons of any middle floor on the floor panel on the floor panel | |
| **Operation procedure:**   1. Press the “UP” or “DOWN” buttons of any middle floor. | |
| **Pre-conditions:**  Elevator car is on any floor which is between the top and lowest floor. | **Post-conditions:**  On this Floor UP/DOWN button is active. |
| **Inputs data and/or events:**   1. Elevator car is on the middle floor 2. Up/ down buttons are pressed | **Expected output data and/or events:**  On the middle floor UP/DOWN button is active. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** BB-FP-EP-06 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 24/10/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description:** Test Floor UP/DOWN button color change when active. | |
| **Operation procedure:**   1. Press the “UP” or “DOWN” buttons of any middle floor. | |
| **Pre-conditions:**  Elevator car is on the 2nd floor  UP/DOWN Button Pressed | **Post-conditions:**  Color of the UP/DOWN button changes. |
| **Inputs data and/or events:**   1. Elevator car is on any middle floor. 2. UP/DOWN button pressed. | **Expected output data and/or events:**  Floor UP/DOWN button color changes. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID**: BB-FP-EP-07 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 24/10/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description:** Test Floor UP/DOWN button color change when active and pressed again. | |
| **Operation procedure:**   1. Press the “UP” or “DOWN” buttons of any middle floor once more. | |
| **Pre-conditions:**  1 Elevator car is on the 2nd floor.   1. UP/DOWN Button pressed again when active. | **Post-conditions:**  Color of the UP/DOWN button is same as once pressed. |
| **Inputs data and/or events:**   1. Elevator car is on any middle floor. 2. UP/DOWN button pressed twice | **Expected output data and/or events:**  Floor UP/DOWN button color is same as once pressed. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID**: BB-FP-EP-08 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 24/10/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description:** Test Floor Indicator when car is moving. | |
| **Operation procedure:**   1. Press the “UP” or “DOWN” buttons on floor panel when car is moving. | |
| **Pre-conditions:**  Car is moving. | **Post-conditions:**  Floor indicator gets updated. |
| **Inputs data and/or events:** Press “UP” or “Down” Button when car is moving. | **Expected output data and/or events:**  Floor indicator should show the value of carid, car type and Floor no. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID**: BB-FP-EP-09 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 24/10/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description:** Test Floor panel when no up/down button is pressed | |
| **Operation procedure:**   1. Don’t press the “UP” or “DOWN” buttons on floor panel. | |
| **Pre-conditions:**  No up/down buttons are pressed and Floor panel is idle | **Post-conditions:**  Floor indicator is idle |
| **Inputs data and/or events:**  the up/down buttons are not pressed on the floor panel | **Expected output data and/or events:**  Floor panel should be idle. |
| **Required test scripts: -** None |  |

###### Decision Table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Conditions** |  | **T1** | **T2** | **T3** | **T4** | **T5** | **T6** | **T7** | **T8** |
| **C1:** Up Button Pressed when car is on top floor. | **T** | **F** | **F** | **F** | **F** | **F** | **F** | **F** |
| **C2:** Up button pressed when car is not on top floor | **F** | **T** | **F** | **F** | **F** | **F** | **F** | **F** |
| **C3:**DownButton Pressed when car is on bottom floor | **F** | **F** | **T** | **F** | **F** | **F** | **F** | **F** |
| **C4:** Down button pressed when car is not on bottom floor | **F** | **F** | **F** | **T** | **F** | **F** | **F** | **F** |
| **C5:** Up button pressed when elevator is moving. | **-** | **-** | **-** | **-** | **T** | **F** | **T** | **-F** |
| **C6:** Down button pressed when elevator is moving. | **-** | **-** | **-** | **-** | **F** | **T** | **T** | **F** |
| **C7:** No button pressed. | **F** | **F** | **F** | **F** | **F** | **T** | **F** | **T** |
| **Actions** | **A1:** Button enabled |  | **X** |  | **X** | **X** | **X** | **X** |  |
| **A2**: Button disabled | **X** |  | **X** |  |  |  |  |  |
| **A3:** Button color changed. |  | **X** |  | **X** | **X** | **X** | **X** |  |
| **A4:** Button color not changed. | **X** |  | **X** |  |  |  |  |  |
| **A5:** Request Added to queue. |  | **X** |  | **X** | **X** | **X** | **X** |  |
| **A6:** Floor panel is Idle |  |  |  |  |  |  |  | **X** |
|  | A7: The Floor panel indicator activates. |  | **X** |  | **X** | **X** | **X** | **X** |  |

###### Decision Table – Test Cases

|  |  |
| --- | --- |
| **Test Case ID:** BB-FP-DT-01 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 24/10/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description:** Test “UP” button of the top floor on the floor panel | |
| **Operation procedure:**   1. Press the “Up” button of the floor panel on the top most floor. | |
| **Pre-conditions:** None. | **Post-conditions:** None |
| **Inputs data and/or events:**  Press the “UP” button on the top most floor in the floor panel. | **Expected output data and/or events:**   * Up button is not enabled. * Button color is not changed * The up request is not added to the request queue. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** BB-FP-DT-02 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 24/10/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description:** Test “UP” button of the floor panel for any floor other than the top floor | |
| **Operation procedure:**   1. Press the “Up” button of the floor panel for any floor other than the top most floor. | |
| **Pre-conditions:** None. | **Post-conditions:** None |
| **Inputs data and/or events:**  Press the “UP” button on the floor panel for any floor besides the top most floor. | **Expected output data and/or events:**  Up Button is enabled.  Button color is changed.  The up request is added to the request queue.  The floor indicator is activated |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** BB-FP-DT-03 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 24/10/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description:** Test “DOWN” button on the floor panel for the bottom floor | |
| **Operation procedure:**   1. Press the **“**Down**”** button of the floor panel on the bottom floor. | |
| **Pre-conditions:** None. | **Post-conditions:** None |
| **Inputs data and/or events:**  Press the “DOWN” button on the floor panel on the bottom floor. | **Expected output data and/or events:**  Down Button is not enabled.  Button color does not change.  The DOWN request is not added to the request queue. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** BB-FP-DT-04 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 24/10/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description:** Test “DOWN” button on the floor panel when floor not in the bottom floor | |
| **Operation procedure:**   1. Press the **“**Down**”** button on any floor other than the bottom floor. | |
| **Pre-conditions:** None. | **Post-conditions:** None |
| **Inputs data and/or events:**  Press the “DOWN” button on the floor panel on any floor other than the bottom floor. | **Expected output data and/or events:**  Down Button is enabled.  Button color is changed.  The DOWN request is added to the request queue.  The floor panel indicator is activated. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** BB –FP-DT-05 | **Test Item:** Floor Panel with floor indicator. |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 24/10/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description:** Test “UP” button is pressed when elevator is moving. | |
| **Operation procedure:**   1. Press the **“**Up**”** button of the floor panel when elevator is moving. | |
| **Pre-conditions:** Elevator is moving. | **Post-conditions:** Floor Indicator activates. |
| **Inputs data and/or events:**  Press the “Up” button. | **Expected output data and/or events:**  The up Button is enabled.  The Button color is changed.  The UP button request is added to the request queue.  Based on the selected algorithm the Floor panel indicator is activated by showing the corresponding car’s Car-id, car-type and floor no. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:**  BB –FP-DT-06 | **Test Item:** Floor Panel with floor indicator. |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 24/10/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description:** Test “DOWN” button pressing when elevator is moving. | |
| **Operation procedure:**   1. Press the “DOWN” button of the floor panel when elevator is moving. | |
| **Pre-conditions:** Elevator is moving. | **Post-conditions:** Floor indicator activated. |
| **Inputs data and/or events:**  Press the “DOWN” button . | **Expected output data and/or events:**  The Down Button is enabled.  The Button color is changed.  The Down button request is added to the request queue.  Based on the selected algorithm the Floor panel indicator is activated by showing the corresponding car’s Car-id, car-type and floor no. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** BB–FP-DT-07 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 24/10/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description:** Test Pressing the “UP” and “DOWN” button on the floor panel one after another when car is moving. | |
| **Operation procedure:**   1. Press the“UP” and **“**DOWN**”** buttons of the floor panel. | |
| **Pre-conditions:** Elevator is moving. | **Post-conditions:** Floor Indicator activated. |
| **Inputs data and/or events:**  Press the “UP ”and “DOWN” buttons one after another. | **Expected output data and/or events:**  Button color activated.  The UP, DOWN request is added to the request queue one after another and based on the selected algorithm the Floor indicator activates by showing the car’s Car-id, car-type and floor no. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** BB-FP-DT-08 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 24/10/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.2 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.2 |
| **Test case description:** Test the floor panel when no activity has been performed. | |
| **Operation procedure:**   1. Testing the floor panel when no button is pressed. | |
| **Pre-conditions:** None. | **Post-conditions:** None |
| **Inputs data and/or events:**  No Activity on floor panel. | **Expected output data and/or events:**  Floor Panel is Idle. |
| **Required test scripts: -** None |  |

### System Function Test Design

We perform System Testing of the entire elevator system to ensure that the changes made to the system are integrated properly with the existing system. It is also done to ensure that there are no side effects to the rest of the system and the entire system functions properly as a whole. We use black box testing for testing the Elevator System as a whole.

#### System Function Re-Test Models, Methods, and Criteria

For System testing, again we have used Equivalence partitioning and Decision Table based testing as the black box testing methods. The models for the two testing methods are provided as below -

###### Equivalence partitioning

The entire Elevator System input space is broken down into various partitions for performing Equivalence Partitioning based Black Box testing. For each partition, the valid and invalid input data set is identified. Some partitions are reused as it is from the previous version.

The new partitions that are added as part of the modifications done in version 3 are –

* Alarm selection and configuration from Admin Console
* Alarm working in User Panel
* Algorithm selection

The list of partitions for the Elevator System black box testing is as follows –

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

|  |  |  |
| --- | --- | --- |
| **Input Space** | **Valid Equivalence Partition** | **Invalid Equivalence Partition** |
| Floor Panel UP button | 1. UP button is pressed from any floor other than top floor when the car is idle, running or stopped. | 1. UP button is pressed from top floor. |
| UP button press color | 1. UP button color changes | 1. Up button color changes when pressed from the top floor. |
| Up button color undo | 1. UP button color changes to original when car reaches the destination. | 1. Up button color changes on the top floor. |
| Floor Panel down button | 1. DOWN button pressed from any floor other than bottom floor when the car is idle, running or stopped. | 1. Down button is pressed from bottom floor. |
| Down button press color | 1. Down button color changes | 1. Down button color when pressed from the bottom floor. |
| Down button color undo | 1. Down button color changes to original when car reaches the destination. | 1. Down button color changes on the bottom floor. |
| Door Panel open/close button | 1. Press Open door when the car is idle or stopped. 2. Press close door when the car is idle or stopped. 3. Press open when the door is closed/ closing. 4. Press close when the door is open/ opening. | 1. Press Open door when the car is moving. 2. Press Close door when the car is moving. 3. Press open when the door is open / opening 4. Press close when the door is closed/ closing. |
| Elevator User Panel floor button | 1. Press one or more floor button to check movement of the car as per input. | 1. Press a button already pressed. 2. Press the floor button on which the car is positioned. |
| User Panel Floor Button color | 1. Floor panel button color when the button is pressed | 1. Floor Panel button color when the button is not pressed. |
| Alarm ON/OFF | 1. Press Alarm ON button when car is moving 2. Press Alarm ON button when car is stationary 3. Press Alarm OFF button when alarm is ON. | 1. Press Alarm OFF button when alarm is already OFF. 2. Press User Panel floor buttons when alarm is ON. |
| Algorithm selection | 1. Select algorithm from among Random, Shortest Path or Least Recently Used. | 1. Unable to select algorithm type of Select any other algorithm type |

###### Decision Table

The various conditions and corresponding actions for the Elevator System are listed in the Decision Table shown below. We have reused the applicable parts from the previous version and added new conditions and actions related to the Alarm and algorithm components.

The decision Table conditions and actions are as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **T1** | **T2** | **T3** | **T4** | **T5** |
| **Conditions:** | **C01** | No. change in configuration |  | **T** | **F** |  |  |
| **C02** | No of cars is changed |  |  | **T** |  | **T** |
| **C03** | No of floors is changed |  |  |  | **T** | **T** |
| **C04** | Show Elevator Button pressed | **F** | **T** | **T** | **T** | **T** |
| **Actions:** | **A1** | System remains idle | **T** |  |  |  |  |
| **A2** | Default Selection of Car Type is Current |  | **T** |  |  |  |
| **A3** | Change in car number on User Panel |  |  | **T** |  | **T** |
| **A4** | Change in floor number on floor Panel |  |  |  | **T** | **T** |

After giving all the correct inputs from user, on pressing the Show Elevator Buttons. Configured cars and no. of floors on floor panel displayed.

**Sub conditions for: One or more buttons pressed on User Panel**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **T6** | **T7** | **T8** | **T9** | **T10** | **T11** | **T12** | **T19** | **T20** | **T36** |
| **Conditions:** | **C05.1** | Floor number of the current floor button -pressed. | **T** | **T** | **T** | **T** | **F** | **F** | **F** | **-** | **-** | **-** |
| **C05.2** | Floor number of the higher floor button pressed. | **T** | **T** | **F** | **F** | **T** | **T** | **F** | **-** | **-** | **-** |
| **C05.3** | Floor number of the lower floor button pressed. | **T** | **F** | **T** | **F** | **T** | **F** | **T** | **-** | **-** | **-** |
| **C05.4** | Alarm ON button is pressed | **F** | **F** | **F** | **F** | **F** | **F** | **F** | **T** | **F** | **T** |
| **C05.5** | Alarm OFF button is pressed | **F** | **F** | **F** | **F** | **F** | **F** | **F** | **F** | **T** | **T** |
| **Actions:** | **A5.1** | System remains idle with no color change  (Floor: 1, Car: Idle, Door: Closed) |  |  |  |  |  |  |  |  |  |  |
| **A5.2** | **Floor Number:** a)Increases by 1 for sequential type car  b)Increases by 2 for even/odd type car  till reaches destination  **Car Status:**  idle->moving up->stopped->idle  **Door Status:**  (closed or opened->closing->closed)->opening->opened->closing->closed | **X** | **X** |  |  | **X** | **X** |  |  |  |  |
| **A5.3** | **Floor Number:** **a)**Decreases by 1for sequential type car  **b)**Decreases by 2 for even/odd type car till reaches destination  **Car Status:**  idle->moving down->stopped->idle  **Door Status:**  (closed or opened->closing->closed)->opening->opened->closing->closed | **X** |  | **X** |  | **X** |  | **X** |  |  |  |
| **A5.4** | **Floor Number:** remains unchanged  **Car Status**  idle->stopped->idle  **Door Status:**  (closed or opened->closing->closed)->opening->opened->closing->closed | **X** | **X** | **X** | **X** |  |  |  |  |  |  |
|  | **A5.5** | **Alarm ON button color turns to RED** |  |  |  |  |  |  |  | **X** |  | **X** |
|  | **A5.6** | **Alarm ON button color turns to GREEN** |  |  |  |  |  |  |  |  |  | **X** |
|  | **A5.7** | **Alarm ‘OFF’ button is enabled** |  |  |  |  |  |  |  | **X** |  | **X** |
|  | **A5.8** | **Floor No button on User Panel are enabled** |  |  |  |  |  |  |  |  | **X** |  |
|  | **A5.9** | **Floor Number buttons on User Panel are disabled** |  |  |  |  |  |  |  | **X** |  | **X** |
|  | **A5.10** | **Alarm ‘OFF’ button is disabled** |  |  |  |  |  |  |  |  | **X** |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **T13** | **T14** | **T15** | **T16** |
| **Conditions** | **C6** | UP /DOWN button pressed from the floor no. which is upper than the car floor. | **T** | **F** | **F** | **F** |
| **C7** | UP / DOWN button pressed from the floor no which is lower than the car no. | **F** | **T** | **F** | **F** |
| **C8** | Car is on its lowest floor.  UP / DOWN button pressed from the same floor. | **F** | **-** | **T** | **F** |
| **C9** | Car is on its highest floor.  UP/ DOWN button pressed from the same floor | **-** | **F** | **F** | **T** |
| **Action** | **A6** | New Car or current Car which is Least recently used comes UP. | **T** |  | **T** |  |
| **A7** | New Car or current Car which is the Least Recently used comes DOWN. |  | **T** |  | **T** |
| **A8** | Door OPENS | **T** | **T** | **T** | **T** |
| **A9** | Floor Indicator on the Floor panel will show the :  1)Car id  2)Car Type  3)Floor no. of the corresponding car. | **T** | **T** | **T** | **T** |

**Sub condition** C10: OPEN/CLOSE button pressed in Door Panel

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **T17** | **T18** |
| **Conditions:** | **C10.1:** OPEN Button pressed | **F** | **F** |
| **C10.2** CLOSE button pressed | **T** | **T** |
| **C10.3:** Door Status: Closed | **T** | **F** |
| **C10.4:** Door Status: Opened | **F** | **T** |
| **A10.1:** Door Status Changes: Opened->Closing-> Closed |  | **X** |
| **A10.2:** System remains Idle | **X** |  |

**Sub conditions for: One or more buttons pressed on Floor Panel**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | T21 | T22 | T23 | T24 | T25 | T26 | T27 | T28 | T29 | T30 | T31 | T32 | T33 | T34 | T35 |
| C  O  N  **D**  **I**  **T**  **I**  **O**  **N**  **S** | **C11.1** | Up Button Pressed when car is on top floor. | T | F | F | F | F | F | F | F | F | F | F | F | F | F | F |
| **C11.2** | Up button pressed when car is not on top floor | F | F | T | F | F | F | F | F | F | F | F | F | F | F | F |
| **C11.3** | Down Button Pressed when car is on bottom floor | F | T | F | F | F | F | F | F | F | F | F | F | F | F | F |
| **C11.4** | Down button pressed when car is not on bottom floor | F | F | F | T | F | F | F | F | F | F | F | F | F | F | F |
| **C11.5** | Up button pressed when elevator is moving. | - | - | F | F | T | F | F | F | F | F | F | F | F | F | F |
| **C11.6** | Down button pressed when elevator is moving. | - | - | F | F | F | T | F | F | F | F | F | F | F | F | F |
| **C11.7** | No button pressed | F | F | F | F | F | F | T | T | F | F | F | F | F | F | F |
|  | **C11.8** | Alarm On button pressed in user panel | - | - | F | F | F | F | F | T | F | T | T | T | F | F | F |
|  | **C11.9** | Alarm off button pressed in user panel after Alarm On button pressed. | - | - | F |  | F | F | F | F | T | F | F | F | T | T | T |
|  | **C11.10** | UP/down button pressed when Alarm On is pressed in one of the car | - | - | F | F | F | F | F | F | F | T | F | F | F | F | F |
|  | **C11.11** | UP/down button pressed on the floor on which the “Car stuck” sign is activated | - | - | F | F | F | F | F | F | F | F | T | F | F | F | F |
|  | **C11.12** | UP/Down button pressed when Alarm On is pressed in all the cars. | - | - | F | F | F | F | F | F | F | F | F | T | F | F | F |
|  | **C11.13** | UP/Down button pressed when Alarm off is pressed in the car which has Alarm On | - | - | F | F | F | F | F | F | F | F | F | F | T | F | F |
|  | **C11.14** | UP/Down button pressed when Alarm off is pressed in all the cars which earlier has Alarm On. | - | - | F | F | F | F | F | F | F | F | F | F | F | T | F |
|  | **C11.15** | UP/down button pressed on the floor on which the alarm off button is pressed for the car. | - | - | F | F | F | F | F | F | F | F | F | F | F | F | T |
| **Actions:** | **A11.1** | Button enabled |  |  | X | X | X | X |  |  |  | X | X | X | X | X | X |
| **A11.2** | Button disabled | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **A11.3** | Button color changed |  |  | X | X | X | X |  |  |  | X | X | X | X | X | X |
| **A11.4** | Button color not changed | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **A11.5** | Request added to queue |  |  | X | X | X | X |  |  |  | X | X | X | X | X | X |
| **A11.6** | Car moves to the selected floor(up/down button pressed floor) |  |  | X | X | X | X |  |  |  | X | X |  | X | X | X |
| **A11.7** | Car won’t move to the selected floor. (Up/down button pressed floor) | X | X |  |  |  |  |  |  |  |  |  | X |  |  |  |
|  | **A11.8** | **Floor panel Alarm indicator field is set to “CAR STUCK” for the particular car** |  |  |  |  |  |  |  | X |  | X | X | X |  |  |  |
|  | **A11.9** | **Floor panel alarm indicator field is set to “CAR ACTIVE”** |  |  |  |  |  |  |  |  | X |  |  |  | X | X | X |
|  | **A11.10** | **Floor panel Idle** |  |  |  |  |  |  | X | X | X |  |  |  |  |  |  |
|  | **A11.11** | **The Floor panel indicator activates.** |  |  | X | X | X | X |  |  |  | X | X |  | X | X | X |

#### System Function Test Case and Test Data

###### Equivalence partitioning

The Test Cases and Test data related to the Equivalence partitions is provided below. We have reused the test cases that were related to the existing partitions and have added new test cases for testing the newly added partitions.

|  |  |  |
| --- | --- | --- |
| **Input Space** | **Valid Equivalence Partition** | **Invalid Equivalence Partition** |
| Floor Panel UP button | 1. UP button is pressed from any floor other than top floor when the car is idle, running or stopped. | 1. UP button is pressed from top floor. |
| UP button press color | 1. UP button color changes | 1. Up button color changes when pressed from the top floor. |
| Up button color undo | 1. UP button color changes to original when car reaches the destination. | 1. Up button color changes on the top floor. |
| Floor Panel down button | 1. DOWN button pressed from any floor other than bottom floor when the car is idle, running or stopped. | 1. Down button is pressed from bottom floor. |
| Down button press color | 1. Down button color changes | 1. Down button color when pressed from the bottom floor. |
| Down button color undo | 1. Down button color changes to original when car reaches the destination. | 1. Down button color changes on the bottom floor. |
| Door Panel open/close button | 1. Press Open door when the car is idle or stopped. 2. Press close door when the car is idle or stopped. 3. Press open when the door is closed/ closing. 4. Press close when the door is open/ opening. | 1. Press Open door when the car is moving. 2. Press Close door when the car is moving. 3. Press open when the door is open / opening 4. Press close when the door is closed/ closing. |
| Elevator User Panel floor button | 1. Press one or more floor button to check movement of the car as per input. | 1. Press a button already pressed. 2. Press the floor button on which the car is positioned. |
| User Panel Floor Button color | 1. Floor panel button color when the button is pressed | 1. Floor Panel button color when the button is not pressed. |
| Alarm ON/OFF | 1. Press Alarm ON button when car is moving 2. Press Alarm ON button when car is stationary 3. Press Alarm OFF button when alarm is ON. | 1. Press Alarm OFF button when alarm is already OFF. 2. Press User Panel floor buttons when alarm is ON. |
| Algorithm selection | 1. Select algorithm from among Random, Shortest Path or Least Recently Used. | 1. Unable to select algorithm type of Select any other algorithm type |

###### Equivalence partitioning -- Test Cases

**Reused test cases**

|  |  |
| --- | --- |
| **Tested Case ID:** ST-EP-01 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  To check the result on pressing the floor panel UP button | |
| **Operation Procedure:** Press the UP button of the floor panel | |
| **Pre-Conditions :**  Up button should not be active | **Post Condition:**  Car reaches the destination floor |
| **Specifications:** | |
| **Input:** UP button pressed from any floor other than top floor when the car is idle, running or stopped. | **Expected Output:** Car should go to the floor where button is pressed. |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| --- | --- |
| **Tested Case ID:** ST-EP-02 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  To check the Up button is disabled for top level | |
| **Operation Procedure:** Press the UP button of the floor panel | |
| **Pre-Conditions :**  User should be on the top level | **Post Condition:**  Nothing happens. |
| **Specifications:** | |
| **Input:** UP button is pressed from top floor. | **Expected Output:** Invalid input, Button disabled. |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

|  |  |
| --- | --- |
| **Tested Case ID:** ST-EP-03 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  To check color when button is pressed. | |
| **Operation Procedure:** Press the UP button of the floor panel | |
| **Pre-Conditions :**  **Button should be inactive** | **Post Condition:**  **Button is pressed** |
| **Specifications:** | |
| **Input:** UP button is pressed | **Expected Output**: Up button light turns on |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

|  |  |
| --- | --- |
| **Tested Case ID:** ST-EP-04 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description**: Up button color when pressed from the top floor. | |
| **Operation Procedure:** Press the UP button of the floor panel | |
| **Pre-Conditions :**  User should be on the top level | **Post Condition:**  Nothing happens. |
| **Specifications:** | |
| **Input:** UP button is pressed from top floor. | **Expected Output:** Invalid input, Button disabled |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| --- | --- |
| **Tested Case ID:** ST-EP-05 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description**: UP button color changes to original when car reaches the destination | |
| **Operation Procedure:** Press the UP button of the floor panel | |
| **Pre-Conditions :**  Up button should be active | **Post Condition:**  Car reaches the destination floor |
| **Specifications:** | |
| **Input:** UP button is pressed by the user | **Expected Output:** Up button light is turned off |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

|  |  |
| --- | --- |
| **Tested Case ID:** ST-EP-06 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:** Up button color changes on the top floor | |
| **Operation Procedure:** Press the UP button of the floor panel | |
| **Pre-Conditions :**  User presses the up button on top level | **Post Condition:**  Nothing happens. |
| **Specifications:** | |
| **Input:** Invalid Input | **Expected Output:** Up button is disabled |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| --- | --- |
| **Tested Case ID:** ST-EP-07 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  To check the result on pressing the floor panel Down button. | |
| **Operation Procedure:** Press the DOWN button of the floor panel | |
| **Pre-Conditions :** Down button should not be active | **Post Condition:** Car reaches the destination floor |
| **Specifications:** | |
| **Input:** Down button pressed from any floor other than top floor when the car is idle, running or stopped. | **Expected Output:** Car should go to the floor where button is pressed. |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| --- | --- |
| **Tested Case ID:** ST-EP-08 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  To check the Down button is disabled for Bottom level | |
| **Operation Procedure:** Press the UP button of the floor panel | |
| **Pre-Conditions :**  User should be on the bottom level | **Post Condition:**  Nothing happens. |
| **Specifications:** | |
| **Input:** Down button is pressed from Bottom floor. | **Expected Output:** Invalid input, Button disabled |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| --- | --- |
| **Tested Case ID:** ST-EP-09 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  To check the color when button is pressed | |
| **Operation Procedure:** Press the DOWN button of the floor panel | |
| **Pre-Conditions :**  Button should be inactiv | **Post Condition:**  Button is pressed |
| **Specifications:** | |
| **Input:** Down button is pressed | **Expected Output:** Down button light turns on |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

|  |  |
| --- | --- |
| **Tested Case ID:** ST-EP-10 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Down button color when pressed from the Bottom floor | |
| **Operation Procedure:** Press the DOWN button of the floor panel | |
| **Pre-Conditions :**  **User should be on the bottom level** | **Post Condition:**  **Nothing happens.** |
| **Specifications:** | |
| **Input:** Down button is pressed from Bottom floor. | **Expected Output:** Invalid input, Button disabled |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

|  |  |
| --- | --- |
| **Tested Case ID:** ST-EP-11 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Down button color changes to original when car reaches the destination | |
| **Operation Procedure:** Press the DOWN button of the floor panel | |
| **Pre-Conditions :**  Down button should be active | **Post Condition:**  car reaches the destination floor |
| **Specifications:** | |
| **Input:** User pressed the Down button | **Expected Output:** Down button light is turned off |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| --- | --- |
| **Tested Case ID:** ST-EP-12 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Down button color changes on the Bottom floor | |
| **Operation Procedure:** Press the DOWN button of the floor panel | |
| **Pre-Conditions :**  User presses the Down button on Bottom level | **Post Condition:**  Nothing happens. |
| **Specifications:** | |
| **Input:** Invalid Input | **Expected Output:** Down button is Disabled |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| --- | --- |
| **Tested Case ID:** ST-EP-13 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  To check the Open button | |
| **Operation Procedure:** Press the OPEN button of the door panel | |
| **Pre-Conditions :**  Car Idle or Stopped | **Post Condition:**  Door is Open |
| **Specifications:** | |
| **Input:** Press the open door button | **Expected Output:** Door opens up |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| --- | --- |
| **Tested Case ID:** ST-EP-14 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  To check the invalid input for open button | |
| **Operation Procedure:** Press the OPEN button of the door panel | |
| **Pre-Conditions :**  **Car is moving** | **Post Condition:**  **nothing happens** |
| **Specifications:** | |
| **Input:** Press the open door button | **Expected Output:** Nothing happens/Invalid Input |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| --- | --- |
| **Tested Case ID:** ST-EP-15 | **Test Item:** ElevatorSystem |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Check the open button for door panel | |
| **Operation Procedure:** Press the OPEN button of the door panel | |
| **Pre-Conditions :**  Door is closing/closed | **Post Condition:**  Door is opened |
| **Specifications:** | |
| **Input:** Press the open door button | **Expected Output:** Door is Open |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

|  |  |
| --- | --- |
| **Tested Case ID:** ST-EP-16 | **Test Item:** ElevatorSystem |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  To check the invalid input for open button | |
| **Operation Procedure:** Press the OPEN button of the door panel | |
| **Pre-Conditions :**  Door is Opening/opened | **Post Condition:**  Door is open |
| **Specifications:** | |
| **Input:** Press the open door button | **Expected Output:** Door is Open |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| --- | --- |
| **Tested Case ID:** ST-EP-17 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  To check the Close button | |
| **Operation Procedure:** Press the CLOSE button of the door panel | |
| **Pre-Conditions :**  Car Idle or Stopped | **Post Condition:**  Door is Closed |
| **Specifications:** | |
| **Input:** Press the chosen door button | **Expected Output:** Door is Closed |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

|  |  |
| --- | --- |
| **Tested Case ID:** ST-EP-18 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  To check the invalid input for close button | |
| **Operation Procedure:** Press the CLOSE button of the door panel | |
| **Pre-Conditions :**  Car is moving | **Post Condition:**  nothing happens |
| **Specifications:** | |
| **Input:** Press the close button | **Expected Output:** Nothing happens/Invalid Input |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |
|  | |
| **Tested Case ID:** ST-EP-19 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Check the close button for door panel | |
| **Operation Procedure:** Press the CLOSE button of the door panel | |
| **Pre-Conditions :**  Door is opening/open | **Post Condition:**  Door is closed |
| **Specifications:** | |
| **Input:** Press the close door button | **Expected Output:** Door is closed |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| --- | --- |
| **Tested Case ID:** ST-EP-20 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:** To check an invalid input at door panel | |
| **Operation Procedure:** Press the CLOSE button of the door panel | |
| **Pre-Conditions :**  Door is Closing/closed | **Post Condition:**  Door is closed |
| **Specifications:** | |
| **Input:** Press the close button | **Expected Output:** Door is closed |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| --- | --- |
| **Tested Case ID:** ST-EP-21 | **Test Item: Elevator System** |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  To check the User Panel floor button | |
| **Operation Procedure:** Press the Floor button of the user panel | |
| **Pre-Conditions :**  No floor is selected | **Post Condition:**  Car reaches the destination floor |
| **Specifications:** | |
| **Input:** One or more floor button are pressed | **Expected Output:** Car uses SPF to visit all floors |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| **Tested Case ID:** ST-EP-22 | **Test Item:** User Panel |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  To check redundancy in pressing a button | |
| **Operation Procedure:** Press the Floor button of the user panel | |
| **Pre-Conditions :**  Button is already pressed | **Post Condition:**  No change |
| **Specifications:** | |
| **Input:** Floor button is pressed | **Expected Output:** Car does not revisit the floor again |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| **Tested Case ID:** ST-EP-23 | **Test Item:** Floor button |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  To check invalid input for floor button | |
| **Operation Procedure:** Press the FLOOR button of the user panel | |
| **Pre-Conditions :**  Car should be on the same floor for which the button is pressed | **Post Condition:**  Car does not move |
| **Specifications:** | |
| **Input:** Press the floor button | **Expected Output:** Car does not move and door is opened |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| **Tested Case ID:** ST-EP-24 | **Test Item:** User Panel |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  To check the button color for floor button | |
| **Operation Procedure:** Press the FLOOR button of the user panel | |
| **Pre-Conditions :**  Button is already pressed | **Post Condition:**  Button color does not change |
| **Specifications:** | |
| **Input:** Press the floor button | **Expected Output:** Color does not change |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| **Tested Case ID:** ST-EP-25 | **Test Item:** User Panel |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #:1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:**  Check the invalid input for floor button | |
| **Operation Procedure:** Press the FLOOR button of the user panel. | |
| **Pre-Conditions :** Button is not pressed | **Post Condition:** Nothing Happens |
| **Specifications:** | |
| **Input:** No button is pressed | **Expected Output:** No change in the color. |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

**Newly added test cases**

|  |  |
| --- | --- |
| **Tested Case ID:** ST-EP-26 | **Test Item:** Elevator System |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:** Press Alarm ON button when car is moving | |
| **Operation Procedure:**   1. Choose the no. of cars and floors. 2. Select Alarm type. 3. Run the elevator system 4. Select a floor button in any car. 5. When the car starts moving, press Alarm ON button inside the car | |
| **Pre-Conditions:**  **Number of Floors:** 5  **Number of Cars:** 3  **Door Configuration:** Single  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Blue  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **Alarm Type:** Text    Click the “Show Elevator” Button | **Post Condition:**  Alarm ON button is pressed.  Car Stops.  External alarm goes off. |
| **Input:**  Press Alarm ON button inside a moving car | **Expected Output:**   1. Internal Alarm is pressed. 2. Car status changes to ALARM\_PRESSED 3. Car Stops at nearest floor. 4. External alarm indicator shows the Car which is stuck in the Alarm Status at the Floor where the car is stopped. 5. Floor buttons inside the car are disabled 6. Alarm OFF button is enabled. 7. Alarm ON button color changes to Blue. |
| **Required Test Script: -** | |

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| **Tested Case ID:** ST-EP-27 | **Test Item:** Elevator System |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:** Press Alarm ON button when car is stationary | |
| **Operation Procedure:**   1. Choose the no. of cars and floors. 2. Select Alarm type. 3. Run the elevator system 4. Press Alarm ON button inside any stationary car | |
| **Pre-Conditions:**  **Number of Floors:** 5  **Number of Cars:** 3  **Door Configuration:** Single  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Blue  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **Alarm Type:** Text    Click the “Show Elevator” Button | **Post Condition:**  Alarm ON button is pressed.  External alarm goes off. |
| **Input:**  Press Alarm ON button inside a stationary car | **Expected Output:**   1. Internal Alarm is pressed. 2. Car status changes to ALARM\_PRESSED 3. External alarm indicator shows the Car which is stuck in the Alarm Status at the Floor where the car is stationary. 4. Floor buttons inside the car are disabled 5. Alarm OFF button is enabled. 6. Alarm ON button color changes to Blue. |
| **Required Test Script: -** | |

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| **Tested Case ID:** ST-EP-28 | **Test Item:** Elevator System |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description**: Press Alarm OFF button when alarm is ON. | |
| **Operation Procedure:**   1. Choose the no. of cars and floors. 2. Select Alarm type. 3. Run the elevator system 4. Press Alarm ON button inside any car 5. Press Alarm OFF button. | |
| **Pre-Conditions:**  **Number of Floors:** 5  **Number of Cars:** 3  **Door Configuration:** Single  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Blue  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **Alarm Type:** Text    Click the “Show Elevator” Button  Press Alarm ON button in any floor. | **Post Condition:**  Car Status is IDLE. |
| **Input:**  Press Alarm OFF button when Alarm is ON in any car. | **Expected Output:**   1. Car status changes to IDLE. 2. External alarm indicator shows the stuck Car as Active. 3. Floor buttons inside the car are enabled 4. Alarm OFF button is disabled. 5. Alarm ON button color changes to Green. |
| **Required Test Script: -** | |

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| **Tested Case ID:** ST-EP-29 | **Test Item:** Elevator System |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:** Press Alarm OFF button when alarm is already OFF. | |
| **Operation Procedure:**   1. Choose the no. of cars. 2. Select Alarm type. 3. Run the elevator system 4. Press Alarm OFF button in any car. | |
| **Pre-Conditions:**  **Number of Floors:** 5  **Number of Cars:** 3  **Door Configuration:** Single  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Blue  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **Alarm Type:** Text    Click the “Show Elevator” Button | **Post Condition:** |
| **Input:**  Press Alarm OFF button in any car. | **Expected Output:**  Alarm OFF button should be disabled. |
| **Required Test Script: -** | |

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| --- | --- |
| **Tested Case ID:** ST-EP-30 | **Test Item:** Elevator System |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:** Press User Panel floor buttons when alarm is ON. | |
| **Operation Procedure:**   1. Choose the no. of cars. 2. Select Alarm type. 3. Run the elevator system 4. Press Alarm ON button in any car. | |
| **Pre-Conditions:**  **Number of Floors:** 5  **Number of Cars:** 3  **Door Configuration:** Single  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Blue  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Least Recently used  **Alarm Type:** Text    Click the “Show Elevator” Button | **Post Condition:**  **-** |
| **Input:**  Press any floor button in User Panel of the selected car. | **Expected Output:**  Floor button in User Panel should be disabled |
| **Required Test Script: -** | |

|  |  |
| --- | --- |
| **Tested Case ID:** ST-EP-31 | **Test Item:** Elevator System |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:** Select algorithm from among Random, Shortest Path or Least Recently Used. | |
| **Operation Procedure:**   1. Choose the no. of cars. 2. Select Algorithm type. | |
| **Pre-Conditions:**  **Number of Floors:** 5  **Number of Cars:** 3  **Door Configuration:** Single  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Blue  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Alarm Type:** Text | **Post Condition:**  User should be allowed to select from among Random, LRU and Shortest Path algorithms only. |
| **Input:**  Select Algorithm type from Admin Console. | **Expected Output:**     1. User should be shown only 3 algorithm options – Random, Shortest Path and Least Recently Used. 2. That algorithm should be activated when the elevator system is run. |
| **Required Test Script: -** | |

|  |  |
| --- | --- |
| **Tested Case ID:** ST-EP-32 | **Test Item:** Elevator System |
| **Written by:** Snigdha Gulhati | **Documented Date:** 10/18/2011 |
| **Test Type:** Black Box | **Test Suite #: 1.2** |
| **Product Name:** Elevator System | **Release and Version No:1.2** |
| **Test case Description:** Unable to select algorithm type of Select any other algorithm type | |
| **Operation Procedure:**   1. Choose the no. of cars. 2. Select Algorithm type. | |
| **Pre-Conditions:**  **Number of Floors:** 5  **Number of Cars:** 3  **Door Configuration:** Single  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Blue  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Alarm Type:** Text | **Post Condition:**  User should be allowed to select from among Random, LRU and Shortest Path algorithms only. |
| **Input:** Select Algorithm type from Admin Console. | **Expected Output:**  User should be shown only 3 algorithm options – Random, Shortest Path and Least Recently Used. |
| **Required Test Script: -** | |

###### Decision Table

The various conditions and corresponding actions for the Elevator System are listed in the Decision Table shown below. We have reused the applicable parts from the previous version and added new conditions and actions related to the Alarm and algorithm components.

The decision Table conditions and actions are as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Legend*** | | | | | |
| **Green** | **New Test Cases** | **Blue** | **Changed Test Case** | **Yellow** | **Reused Test Case** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **T1** | **T2** | **T3** | **T4** | **T5** |
| **Conditions:** | **C01** | No. change in configuration |  | **T** | **F** |  |  |
| **C02** | No of cars is changed |  |  | **T** |  | **T** |
| **C03** | No of floors is changed |  |  |  | **T** | **T** |
| **C04** | Show Elevator Button pressed | **F** | **T** | **T** | **T** | **T** |
| **Actions:** | **A1** | System remains idle | **T** |  |  |  |  |
| **A2** | Default Selection of Car Type is Current |  | **T** |  |  |  |
| **A3** | Change in car number on User Panel |  |  | **T** |  | **T** |
| **A4** | Change in floor number on floor Panel |  |  |  | **T** | **T** |

After giving all the correct inputs from user, on pressing the Show Elevator Buttons. Configured cars and no. of floors on floor panel displayed.

**Sub conditions for: One or more buttons pressed on User Panel**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **T6** | **T7** | **T8** | **T9** | **T10** | **T11** | **T12** | **T19** | **T20** | **T36** |
| **Conditions:** | **C05.1** | Floor number of the current floor button -pressed. | **T** | **T** | **T** | **T** | **F** | **F** | **F** | **-** | **-** | **-** |
| **C05.2** | Floor number of the higher floor button pressed. | **T** | **T** | **F** | **F** | **T** | **T** | **F** | **-** | **-** | **-** |
| **C05.3** | Floor number of the lower floor button pressed. | **T** | **F** | **T** | **F** | **T** | **F** | **T** | **-** | **-** | **-** |
| **C05.4** | Alarm ON button is pressed | **F** | **F** | **F** | **F** | **F** | **F** | **F** | **T** | **F** | **T** |
| **C05.5** | Alarm OFF button is pressed | **F** | **F** | **F** | **F** | **F** | **F** | **F** | **F** | **T** | **T** |
| **Actions:** | **A5.1** | System remains idle with no color change  (Floor: 1, Car: Idle, Door: Closed) |  |  |  |  |  |  |  |  |  |  |
| **A5.2** | **Floor Number:** a)Increases by 1 for sequential type car  b)Increases by 2 for even/odd type car  till reaches destination  **Car Status:**  idle->moving up->stopped->idle  **Door Status:**  (closed or opened->closing->closed)->opening->opened->closing->closed | **X** | **X** |  |  | **X** | **X** |  |  |  |  |
| **A5.3** | **Floor Number:** **a)**Decreases by 1for sequential type car  **b)**Decreases by 2 for even/odd type car till reaches destination  **Car Status:**  idle->moving down->stopped->idle  **Door Status:**  (closed or opened->closing->closed)->opening->opened->closing->closed | **X** |  | **X** |  | **X** |  | **X** |  |  |  |
| **A5.4** | **Floor Number:** remains unchanged  **Car Status**  idle->stopped->idle  **Door Status:**  (closed or opened->closing->closed)->opening->opened->closing->closed | **X** | **X** | **X** | **X** |  |  |  |  |  |  |
|  | **A5.5** | **Alarm ON button color turns to RED** |  |  |  |  |  |  |  | **X** |  | **X** |
|  | **A5.6** | **Alarm ON button color turns to GREEN** |  |  |  |  |  |  |  |  |  | **X** |
|  | **A5.7** | **Alarm ‘OFF’ button is enabled** |  |  |  |  |  |  |  | **X** |  | **X** |
|  | **A5.8** | **Floor No button on User Panel are enabled** |  |  |  |  |  |  |  |  | **X** |  |
|  | **A5.9** | **Floor Number buttons on User Panel are disabled** |  |  |  |  |  |  |  | **X** |  | **X** |
|  | **A5.10** | **Alarm ‘OFF’ button is disabled** |  |  |  |  |  |  |  |  | **X** |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **T13** | **T14** | **T15** | **T16** |
| **Conditions** | **C6** | UP /DOWN button pressed from the floor no. which is upper than the car floor. | **T** | **F** | **F** | **F** |
| **C7** | UP / DOWN button pressed from the floor no which is lower than the car no. | **F** | **T** | **F** | **F** |
| **C8** | Car is on its lowest floor.  UP / DOWN button pressed from the same floor. | **F** | **-** | **T** | **F** |
| **C9** | Car is on its highest floor.  UP/ DOWN button pressed from the same floor | **-** | **F** | **F** | **T** |
| **Action** | **A6** | New Car or current Car which is Least recently used comes UP. | **T** |  | **T** |  |
| **A7** | New Car or current Car which is the Least Recently used comes DOWN. |  | **T** |  | **T** |
| **A8** | Door OPENS | **T** | **T** | **T** | **T** |
| **A9** | Floor Indicator on the Floor panel will show the :  1)Car id  2)Car Type  3)Floor no. of the corresponding car. | **T** | **T** | **T** | **T** |

**Sub condition** C10: OPEN/CLOSE button pressed in Door Panel

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **T17** | **T18** |
| **Conditions:** | **C10.1:** OPEN Button pressed | **F** | **F** |
| **C10.2** CLOSE button pressed | **T** | **T** |
| **C10.3:** Door Status: Closed | **T** | **F** |
| **C10.4:** Door Status: Opened | **F** | **T** |
| **A10.1:** Door Status Changes: Opened->Closing-> Closed |  | **X** |
| **A10.2:** System remains Idle | **X** |  |

**Sub conditions for: One or more buttons pressed on Floor Panel**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | T21 | T22 | T23 | T24 | T25 | T26 | T27 | T28 | T29 | T30 | T31 | T32 | T33 | T34 | T35 |
| C  O  N  **D**  **I**  **T**  **I**  **O**  **N**  **S** | **C11.1** | Up Button Pressed when car is on top floor. | T | F | F | F | F | F | F | F | F | F | F | F | F | F | F |
| **C11.2** | Up button pressed when car is not on top floor | F | F | T | F | F | F | F | F | F | F | F | F | F | F | F |
| **C11.3** | Down Button Pressed when car is on bottom floor | F | T | F | F | F | F | F | F | F | F | F | F | F | F | F |
| **C11.4** | Down button pressed when car is not on bottom floor | F | F | F | T | F | F | F | F | F | F | F | F | F | F | F |
| **C11.5** | Up button pressed when elevator is moving. | - | - | F | F | T | F | F | F | F | F | F | F | F | F | F |
| **C11.6** | Down button pressed when elevator is moving. | - | - | F | F | F | T | F | F | F | F | F | F | F | F | F |
| **C11.7** | No button pressed | F | F | F | F | F | F | T | T | F | F | F | F | F | F | F |
|  | **C11.8** | Alarm On button pressed in user panel | - | - | F | F | F | F | F | T | F | T | T | T | F | F | F |
|  | **C11.9** | Alarm off button pressed in user panel after Alarm On button pressed. | - | - | F |  | F | F | F | F | T | F | F | F | T | T | T |
|  | **C11.10** | UP/down button pressed when Alarm On is pressed in one of the car | - | - | F | F | F | F | F | F | F | T | F | F | F | F | F |
|  | **C11.11** | UP/down button pressed on the floor on which the “Car stuck” sign is activated | - | - | F | F | F | F | F | F | F | F | T | F | F | F | F |
|  | **C11.12** | UP/Down button pressed when Alarm On is pressed in all the cars. | - | - | F | F | F | F | F | F | F | F | F | T | F | F | F |
|  | **C11.13** | UP/Down button pressed when Alarm off is pressed in the car which has Alarm On | - | - | F | F | F | F | F | F | F | F | F | F | T | F | F |
|  | **C11.14** | UP/Down button pressed when Alarm off is pressed in all the cars which earlier has Alarm On. | - | - | F | F | F | F | F | F | F | F | F | F | F | T | F |
|  | **C11.15** | UP/down button pressed on the floor on which the alarm off button is pressed for the car. | - | - | F | F | F | F | F | F | F | F | F | F | F | F | T |
| **Actions:** | **A11.1** | Button enabled |  |  | X | X | X | X |  |  |  | X | X | X | X | X | X |
| **A11.2** | Button disabled | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **A11.3** | Button color changed |  |  | X | X | X | X |  |  |  | X | X | X | X | X | X |
| **A11.4** | Button color not changed | X | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **A11.5** | Request added to queue |  |  | X | X | X | X |  |  |  | X | X | X | X | X | X |
| **A11.6** | Car moves to the selected floor(up/down button pressed floor) |  |  | X | X | X | X |  |  |  | X | X |  | X | X | X |
| **A11.7** | Car won’t move to the selected floor. (Up/down button pressed floor) | X | X |  |  |  |  |  |  |  |  |  | X |  |  |  |
|  | **A11.8** | **Floor panel Alarm indicator field is set to “CAR STUCK” for the particular car** |  |  |  |  |  |  |  | X |  | X | X | X |  |  |  |
|  | **A11.9** | **Floor panel alarm indicator field is set to “CAR ACTIVE”** |  |  |  |  |  |  |  |  | X |  |  |  | X | X | X |
|  | **A11.10** | **Floor panel Idle** |  |  |  |  |  |  | X | X | X |  |  |  |  |  |  |
|  | **A11.11** | **The Floor panel indicator activates.** |  |  | X | X | X | X |  |  |  | X | X |  | X | X | X |

###### Decision Table -- Test Cases

|  |  |
| --- | --- |
| **Test Case ID:** ST-DT-01 | **Test Item:** Admin Console |
| **Wrote By:** Bindiya Thomas | **Documented Date:** 10/22/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check if the system remains IDLE if the show Elevator Button is not pressed.. | |
| **Operation procedure:**   1. Do not change no. of cars keep default. 2. Do not press the show elevator button. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  Show Elevator Button appears | **Post-conditions:**  System should remain idle and wait for user input |
| **Inputs data and/or events:**  Do not click the “Show elevator Button” | **Expected output data and/or events:**  System remains idle |
| **Required test scripts: -** None |  |

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| --- | --- |
| **Test Case ID:** ST-DT-02 | **Test Item:** Admin Console |
| **Wrote By:** Bindiya Thomas | **Documented Date:** 10/22/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check if the User Panel and floor Panel change when changes are made in Admin Console. | |
| **Operation procedure:**   1. Do not change no. of cars keep default . 2. Press the show elevator button. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  Show Elevator Button appears | **Post-conditions:**  System should remain idle and wait for user input |
| **Inputs data and/or events:**  Click the “Show elevator Button” | **Expected output data and/or events:**  User Panel and Floor panel remain the same. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** ST-DT-03 | **Test Item:** Admin Console |
| **Wrote By:** Bindiya Thomas | **Documented Date:** 10/22/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check if the User Panel changes if the number o cars is changed | |
| **Operation procedure:**   1. Change no of cars 2. Press the show elevator button. | |
| **Pre-conditions:**  There must be a configurable Component to select the number of cars  Show Elevator Button appears | **Post-conditions:**  System should remain idle and wait for user input |
| **Inputs data and/or events:**  Click the “Show elevator Button” | **Expected output data and/or events:**  The User Panel shows changed number of Cars |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-04 | **Test Item:** Admin Console |
| **Wrote By:** Bindiya Thomas | **Documented Date:** 10/22/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check if the Floor Panel changes if the number of floors is changed. . | |
| **Operation procedure:**   1. Change no of floors 2. Press the show elevator button. | |
| **Pre-conditions:**  There must be a configurable Component to select the number of floors  Show Elevator Button appears | **Post-conditions:**  System should remain idle and wait for user input |
| **Inputs data and/or events:**  Click the “Show elevator Button” | **Expected output data and/or events:**  The Floor Panel shows changed number of Floors. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-05 | **Test Item:** Admin Console |
| **Wrote By:** Bindiya Thomas | **Documented Date:** 10/22/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check if the User Panel and Floor Panel changes if the number of cars and floors is changed. . | |
| **Operation procedure:**   1. Change no of floors and number of cars. 2. Press the show elevator button. | |
| **Pre-conditions:**  There must be a configurable Component to select the number of floors and number of cars  Show Elevator Button appears | **Post-conditions:**  System should remain idle and wait for user input |
| **Inputs data and/or events:**  Click the “Show elevator Button” | **Expected output data and/or events:**  The Floor Panel shows changed number of Floors.  The User Panel shows changed number of Cars. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-6 | **Test Item:** User Panel |
| **Wrote By: Bindiya Thomas** | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check the usage output for User Panel inputs when only Lower floor number button is pressed. | |
| **Operation procedure:**   1. Choose the no. of cars. 2. Choose the type. 3. On each in user panel press the no. Lower than current floor no. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System reaches to the desired lower floor. |
| **Inputs data and/or events:**  Only Lower floor button is pressed of User Panel. | **Expected output data and/or events:**  System will change its Button Colors, Car Status, Door Status and Floor Number depending on the algorithm. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-7 | **Test Item:** Floor Panel |
| **Wrote By: Bindiya Thomas** | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check the usage output for only Floor Panel. | |
| **Operation procedure:**   1. Choose the no. of cars . 2. Choose the type. 3. Press any button on floor panel**.** | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System must show changing values for Button Colors, Car Status, Door Status and Floor Number. |
| **Inputs data and/or events:**  Buttons pressed on only Floor Panel one after another. | **Expected output data and/or events:**  System will change its Button Colors, Car Status, Door Status and Floor Number depending on the algorithm. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-8 | **Test Item:** Floor Panel |
| **Wrote By: Bindiya Thomas** | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check the usage output for Floor Panel inputs when all current, higher and lower floor UP/DOWN buttons are pressed. | |
| **Operation procedure:**   1. Choose the no. of cars . 2. Choose the type. 3. Press any button of current floor, higher floor and lower floor. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System reaches to the desired floor after changing values for Button Colors, Car Status, Door Status and Floor Number. |
| **Inputs data and/or events:**  Current, higher and lower floor UP/DOWN buttons of Floor Panel are pressed one after another. | **Expected output data and/or events:**  System will change its Button Colors, Car Status, Door Status and Floor Number depending on the algorithm. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-9 | **Test Item:** Floor Panel |
| **Wrote By: Bindiya Thomas** | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check the usage output for Floor Panel inputs when current and higher floor UP/DOWN buttons are pressed.. | |
| **Operation procedure:**   1. Choose the no. of cars . 2. Choose the type. 3. Press any button of current floor, higher floor. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System reaches to the desired floor after changing values for Button Colors, Car Status, Door Status and Floor Number. |
| **Inputs data and/or events:**  Current and higher floor UP/DOWN buttons of Floor Panel are pressed one after another. | **Expected output data and/or events:**  System will change its Button Colors, Car Status, Door Status and Floor Number depending on the algorithm. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-10 | **Test Item:** Floor Panel |
| **Wrote By: Bindiya Thomas** | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check the usage output for Floor Panel inputs when all current and lower floor UP/DOWN buttons are pressed on floor panel. | |
| **Operation procedure:**   1. Choose the no. of cars . 2. Choose the type. 3. Press any button of current floor, and Lower floor. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System reaches to the desired floor after changing values for Button Colors, Car Status, Door Status and Floor Number. |
| **Inputs data and/or events:**  Current and Lower floor UP/DOWN buttons of Floor Panel are pressed one after another. | **Expected output data and/or events:**  System will change its Button Colors, Car Status, Door Status and Floor Number depending on the algorithm. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-11 | **Test Item:** Floor Panel |
| **Wrote By: Bindiya Thomas** | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check the usage output for Floor Panel inputs when only current floor UP/DOWN buttons are pressed.. | |
| **Operation procedure:**   1. Choose the no. of cars . 2. Choose the type. 3. Press any button of current floor. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System remains on the current floor after changing values for Button Colors, Car Status, Door Status and Floor Number. |
| **Inputs data and/or events:**  Only current floor UP/DOWN buttons are pressed User Panel one after another. | **Expected output data and/or events:**  System will change its Button Colors, Car Status, Door Status and Floor Number depending on the algorithm |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-12 | **Test Item:** Floor Panel |
| **Wrote By: Bindiya Thomas** | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check the usage output for Floor Panel inputs when Higher and lower floor UP/DOWN buttons are pressed on User Panel one after another. | |
| **Operation procedure:**   1. Choose the no. of cars. 2. Choose the type. 3. Press any button higher and lower than current floor. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System reaches to the desired floor after changing values for Button Colors, Car Status, Door Status and Floor Number. |
| **Inputs data and/or events:**  Higher and lower floor UP/DOWN buttons are pressed User Panel one after another. | **Expected output data and/or events:**  System will change its Button Colors, Car Status, Door Status and Floor Number depending on the algorithm.  Floor indicator updated the car id, car type and Floor number. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-13 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 10/25/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description: To check which car answers the call when an up/down button is pressed with the floor no. above the car floor** | |
| **Operation procedure:**   1. Press the up/down button from the floor panel, which is above the car floor no. 2. Check which car answers the request and how it moves | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System reaches to the desired floor, and the carid, car type, floor no are indicated. |
| **Inputs data and/or events:**  Up/down button is pressed on the floor panel with the floor panel floor no above the car floor. | **Expected output data and/or events:**  A new car or a current car which is least recently used comes up to the floor. The door opens and the carid, car type, floor no are indicated |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-14 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 10/25/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description: To check which car answers the call when an up/down button is pressed with the floor no. below the car floor** | |
| **Operation procedure:**   1. Press the up/down button from the floor panel which is below the car floor. 2. Check which car answers the request and how it moves | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System reaches to the desired floor, and the carid, car type, floor no are indicated. |
| **Inputs data and/or events:**  Up/down button is pressed on the floor panel with the floor panel floor no below the car floor. | **Expected output data and/or events:**  A new car or a current car which is least recently used comes down to the floor. The door opens and the carid, car type, floor no are indicated |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-15 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date: 10**/25/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description: To check which car answers the call when an car is in its lowest floor and up/down button is pressed from the same floor** | |
| **Operation procedure:**   1. Press the up/down button from the floor panel which is the lowest floor. 2. Check which car answers the request and how it moves | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  The door is opened, and the carid, car type, floor no are indicated. |
| **Inputs data and/or events:**  Up/down button is pressed on the floor panel with the floor panel floor on the lowest floor and the car on the lowest floor. | **Expected output data and/or events:**  The door opens and the carid, car type, floor no are indicated |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-16 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 10/25/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description: To check which car answers the call when an car is in its highest floor and up/down button is pressed from the same floor** | |
| **Operation procedure:**   1. Press the up/down button from the floor panel which is the lowest floor. 2. Check which car answers the request and how it moves | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  The door is opened, and the carid, car type, floor no are indicated. |
| **Inputs data and/or events:**  Up/down button is pressed on the floor panel with the floor panel floor on the lowest floor and the car on the lowest floor. | **Expected output data and/or events:**  The door opens and the carid, car type, floor no are indicated |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-17 | **Test Item:** Car |
| **Wrote By: Bindiya Thomas** | **Documented Date:** 04/23/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** On pressing thehighest floor panel button, then lowest button from user panel, then second lowest button from user panel the floor number inside the car of the elevator system  goes into the infinite loop. | |
| **Operation procedure:**   1. Run the elevator system. 2. Press the highest button on the floor panel.   3. Press the lowest button from the user panel.  4. Press the second lowest button from the user panel.  5. Floor number inside the Car goes into the infinite loop. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Number Of Cars**:3  **Select the car type.**  **click** “OK” **Button in Selection window**  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path | **Post-conditions:**  System get configured. |
| **Inputs data and/or events:**  Click the **Show Elevator** button, then press the buttons from floor panel then user panel and then again from user panel. | **Expected output data and/or events:**  The Floor number box inside the car should get updated accordingly ,and should not go to the infinite loop. |

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| **Test Case ID:** ST-DT-18 | **Test Item:** User Panel, Floor Panel |
| **Wrote By: Bindiya Thomas** | **Documented Date:** 04/23/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** On pressing thehighest User panel button, then lowest button from floor panel, then second lowest button from floor panel the floor number inside the car of the elevator system  goes into the infinite loop. | |
| **Operation procedure:**   1. Run the elevator system. 2. Press the highest button on the user panel.   3. Press the lowest button from the floor panel.  4. Press the second lowest button from the floor panel.  5. Floor number inside the Car goes into the infinite loop. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Number Of Cars**:3  **Select the car type.**  **click** “OK” **Button in Selection window**  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path | **Post-conditions:**  System get configured. |
| **Inputs data and/or events:**  Click the **Show Elevator** button, then press the buttons from user panel then from floor panel and then again from floor panel. | **Expected output data and/or events:**  The Floor number box inside the car should get updated accordingly ,and should not go to the infinite loop. |

New Test Cases:

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| **Test Case ID:** ST-DT-19 | **Test Item:** User Panel |
| **Wrote By:** Bindiya Thomas | **Documented Date:** 10/20/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check the change in appearance of user Panel when alarm button is pressed | |
| **Operation procedure:**   1. Press the alarm button on the user Panel | |
| **Pre-conditions:**  Click the “Show Elevator” Button after selecting text display for Alarm.  Alarm ON button is not pressed | **Post-conditions:**  Elevator user panel and floor panel appear |
| **Inputs data and/or events:**  Click the alarm ON button | **Expected output data and/or events:**  The alarm button color changes to RED  The Alarm OFF button becomes enabled  All the floor number buttons become disabled |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-20 | **Test Item:** User Panel |
| **Wrote By:** Bindiya Thomas | **Documented Date:** 10/20/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check the change in appearance of user Panel when alarm OFF button is pressed without pressing the Alarm ON button | |
| **Operation procedure:**   1. Press the Alarm OFF button. | |
| **Pre-conditions:**  Click the “Show Elevator” Button after selecting text display for Alarm.  Alarm button ON button is not pressed | **Post-conditions:**  Elevator user panel and floor panel appear |
| **Inputs data and/or events:**  Press the Alarm OFF button | **Expected output data and/or events:**  The alarm OFF button is disabled and cannot be pressed. No change in state of any other button on floor panel. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-21 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date: 10**/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** check for how the up button works when pressed on the floor panel on the top most floor | |
| **Operation procedure:**   1. The up button is clicked on the floor panel for a floor which is the top floor. 2. Then we check whether the button is enabled or not, whether the color of button changes after it is pressed and whether the car moves to the selected floor. | |
| **Pre-conditions:**  Number of Floors: 5  Door Configuration: Double Door  User Panel Color: Green  User Panel Pressed Button Color: Blue  Floor Panel Color: Yellow  Floor Panel Pressed Button Color: Red  Floor Panel Display: Text  Door Panel Display: Text  Algorithm Type: Shortest Path  click the “Show Elevator” Button  Floor in the upper floor. | **Post-conditions:**  Car doesn’t reach to the desired floor. |
| **Inputs data and/or events:**  The up button is pressed on the floor panel for a floor which is the top floor. | **Expected output data and/or events:**  Car does not move to the selected floor, the up button is disabled to be pressed. The change of color on the button is not seen after it is pressed. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-22 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check for how the down button works on the floor panel on the bottom most floor | |
| **Operation procedure:**   1. The down button is clicked on the floor panel for a floor which is the lowest floor. 2. Then we check whether the button is enabled or not, whether the color of button changes after it is pressed and whether the car moves to the selected floor | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button**  **Car is on the bottom floor** | **Post-conditions:**  Car doesn’t reach the desired floor. |
| **Inputs data and/or events:**  The down button is pressed on the floor panel for a floor which is the lower floor. | **Expected output data and/or events:**  Car does not move to the selected floor, the down button is disabled. The change of color on the button is not seen after it is pressed. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-23 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date: 10**/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** check for how the up button works when pressed on the floor panel | |
| **Operation procedure:**   1. The up button is clicked on the floor panel for a floor which is not the top floor. 2. Then we check whether the button is enabled or not and whether the color of button changes after it is pressed. | |
| **Pre-conditions:**  Number of Floors: 5  Door Configuration: Double Door  User Panel Color: Green  User Panel Pressed Button Color: Blue  Floor Panel Color: Yellow  Floor Panel Pressed Button Color: Red  Floor Panel Display: Text  Door Panel Display: Text  Algorithm Type: Shortest Path  click the “Show Elevator” Button  Floor not in the upper floor. | **Post-conditions:**  Car reaches to the desired floor. |
| **Inputs data and/or events:**  The up button is pressed on the floor panel for a floor which is not on the top floor. | **Expected output data and/or events:**  The up button is enabled to be pressed. The change of color on the button is seen after it is pressed. The request is added to the queue. The floor indicator is activated. Car moves to the selected floor. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-24 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check for how the down button works on the floor panel | |
| **Operation procedure:**   1. The down button is clicked on the floor panel for a floor which is not the lowest floor. 2. Then we check whether the button is enabled or not and whether the color of button changes after it is pressed. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  Car reaches to the desired floor. |
| **Inputs data and/or events:**  The down button is pressed on the floor panel for a floor which is not on the lower floor. | **Expected output data and/or events:**  The down button is enabled. The change of color on the button is seen after it is pressed. The request is added to the queue. Car moves to the selected floor. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-25 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check how the up button work while the elevator is moving. | |
| **Operation procedure:**   1. Click on the up button on any floor 2. Check whether the button is enabled. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button**  **up button not clicked on top floor** | **Post-conditions:**  Car reaches the desired floor. |
| **Inputs data and/or events:**  The up button on the floor is pressed. | **Expected output data and/or events:**  The up button is enabled to be pressed. The change of color on the button is seen after it is pressed. The request is added to the queue. The floor indicator is activated. Car moves to the selected floor. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-26 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check how the down button works while the elevator is moving. | |
| **Operation procedure:**   1. Click on the down button on any floor 2. Check whether the button is enabled. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button**  **down button not clicked on bottom floor** | **Post-conditions:**  Car reaches the desired floor. |
| **Inputs data and/or events:**  The down button on the floor is pressed. | **Expected output data and/or events:**  The down button is enabled to be pressed. The change of color on the button is seen after it is pressed. The request is added to the queue. The floor indicator is activated. Car moves to the selected floor. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** ST-DT-27 | **Test Item:** Floor Panel |
| **Wrote By:** Hemanth Nimma | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check whether the system remains idle when no up/down button is pressed in the floor panel | |
| **Operation procedure:**   1. Don’t click on up/down buttons in the floor panel. 2. Check for the system whether any car is moving or not | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System should remain idle with no cars moving. |
| **Inputs data and/or events:**  **Don’t press any buttons on the floor panel.** | **Expected output data and/or events:**  System should remain idle, with no cars moving. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** ST-DT-28 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check whether the alarm indicator status is turned on in the floor panel when the alarm on button is pressed in the user panel | |
| **Operation procedure:**   1. The alarm is turned on in the user panel 2. Then we check whether the alarm status in the floor panel is activated or not | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button**  **Alarm on button pressed on user panel** | **Post-conditions:**  Alarm status is changed in the floor panel |
| **Inputs data and/or events:**  The alarm on button is pressed in the user panel indicating an alarm is ON | **Expected output data and/or events:**  The floor panel alarm indicator field text is changed to “Car stuck”. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** ST-DT-29 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check whether the alarm indicator status is turned off in the floor panel when the Alarm off button is pressed in the user panel | |
| **Operation procedure:**   1. The alarm is turned off in the user panel 2. Then we check whether the alarm status in the floor panel is changed or not | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button**  **Alarm off button is pressed on the user panel (after the alarm on is previously pressed.)** | **Post-conditions:**  Alarm status is changed in the floor panel |
| **Inputs data and/or events:**  The alarm off button is pressed in the user panel indicating an alarm is Off | **Expected output data and/or events:**  The floor panel alarm indicator field should be turned to “car active”. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** ST-DT-30 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check how the up/down button pressed on a floor work when the alarm on button is pressed in one of the car | |
| **Operation procedure:**   1. The alarm on is pressed in the user panel. 2. The up/down button is pressed on the floor panel. 3. Then we check whether the car is moving to desired floor. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button**  **Alarm on button is pressed on the user panel and struck car is not on the floor on which up/down button is pressed.** | **Post-conditions:**  The car moves to the desired floor |
| **Inputs data and/or events:**  The up/downbutton is pressed in floor panel. | **Expected output data and/or events:**  The up/down button is enabled to be pressed. The change of color on the button is seen after it is pressed. The request is added to the queue. The floor indicator is activated. Car moves to the selected floor. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** ST-DT-31 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check how the up/down button pressed on a floor on which the car got stuck work. | |
| **Operation procedure:**   1. The alarm on is pressed in the user panel. 2. The up/down button is pressed on the floor on which the car got stuck. 3. Then we check whether the car is moving to desired floor. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button**  **Alarm on button is pressed on the user panel and struck car is on the floor on which up/down button is pressed.** | **Post-conditions:**  The car moves to the desired floor. |
| **Inputs data and/or events:**  The up/downbutton is pressed in floor panel. | **Expected output data and/or events:**  The up/down button is enabled to be pressed. The change of color on the button is seen after it is pressed. The request is added to the queue. The floor indicator is activated. Car moves to the selected floor. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** ST-DT-32 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** Check how the up/down button pressed on any floor work when all the cars are stuck. | |
| **Operation procedure:**   1. The alarm on is pressed in all the cars of the user panel. 2. The up/down button is pressed on any of the floors. 3. Then we check whether the car is moving to desired floor. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button**  **Alarm on button is pressed on all the cars of the user panel.** | **Post-conditions:**  The car doesn’t move to the desired floor. |
| **Inputs data and/or events:**  The up/downbutton is pressed in floor panel. | **Expected output data and/or events:**  The up/down button is enabled to be pressed. The change of color on the button is seen after it is pressed. The request is added to the queue. The floor indicator is not activated. Car doesn’t move to the selected floor. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** ST-DT-33 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** To check how theUP/Down button pressed on the floor panel work when Alarm off is pressed in the car. | |
| **Operation procedure:**   1. The alarm off button is pressed in the car of the user panel. 2. The up/down button is pressed on any of the floors. 3. Then we check whether the car is moving to desired floor. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button**  **Alarm on button is pressed on the car and then alarm off button is pressed.** | **Post-conditions:**  The car moves to the desired floor. |
| **Inputs data and/or events:**  The up/downbutton is pressed in floor panel. | **Expected output data and/or events:**  The up/down button is enabled to be pressed. The change of color on the button is seen after it is pressed. The request is added to the queue. The floor indicator is activated. Car moves to the selected floor. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** ST-DT-34 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** To check how theUP/Down button pressed on the floor panel work when Alarm off is pressed in all the cars. | |
| **Operation procedure:**   1. The alarm off button is pressed in all the cars of the user panel. 2. The up/down button is pressed on any of the floors. 3. Then we check whether the car is moving to desired floor. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button**  **Alarm on button is pressed on all the cars and then alarm off button is pressed on all the cars.** | **Post-conditions:**  The car moves to the desired floor. |
| **Inputs data and/or events:**  The up/downbutton is pressed in floor panel. | **Expected output data and/or events:**  The up/down button is enabled to be pressed. The change of color on the button is seen after it is pressed. The request is added to the queue. The floor indicator is activated. Car moves to the selected floor. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID:** ST-DT-35 | **Test Item:** Floor Panel |
| **Wrote By:** Nimma Hemanth | **Documented Date:** 10/24/2011 |
| **Test Type:** Black Box Testing | **Test Suite#: 1.2** |
| **Product Name:** Elevator System | **Release and Version No.: 1.2** |
| **Test case description:** To check how theUP/Down button pressed on the floor on which the alarm off button is pressed for the car work. | |
| **Operation procedure:**   1. The alarm off button is pressed in the car of the user panel. 2. The up/down button is pressed on the floor on which the car was previously stuck. 3. we check whether the car is moving to desired floor. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button**  **Alarm on button is pressed on the car and then alarm off button is pressed on the car.** | **Post-conditions:**  The car moves to the desired floor. |
| **Inputs data and/or events:**  The up/downbutton is pressed in floor on which the alarm off button is pressed.. | **Expected output data and/or events:**  The up/down button is enabled to be pressed. The change of color on the button is seen after it is pressed. The request is added to the queue. The floor indicator is activated. Car moves to the selected floor. |
| **Required test scripts: -** None |  |

|  |  |
| --- | --- |
| **Test Case ID: ST-DT-36** | **Test Item: User Panel** |
| **Wrote By: Bindiya Thomas** | **Documented Date: 10/20/2011** |
| **Test Type: Black Box Testing** | **Test Suite#: 1.2** |
| **Product Name: Elevator System** | **Release and Version No.: 1.2** |
| **Test case description:** Check the change in appearance of user Panel when alarm OFF button is pressed after pressing the Alarm ON button | |
| **Operation procedure:**   1. Press the Alarm OFF button. | |
| **Pre-conditions:**  Click the “Show Elevator” Button after selecting text display for Alarm.  Alarm button ON button is pressed. | **Post-conditions:**  Elevator user panel and floor panel appear |
| **Inputs data and/or events:**  Press the Alarm OFF button | **Expected output data and/or events:**  The alarm OFF button is enabled. The Alarm ON button color changes from RED to Green. The floor number buttons are all enabled. |
| **Required test scripts: -** None |  |

# Chapter #3: REGRESSION TEST CASE SUMMARY, DISTRIBUTION AND CLASSIFICATION

## Graphical Representation of Test Cases - Component wise

This Test Design Specification document includes Test Cases for testing the Version 3 of the Elevator System. Various test cases have been generated to test each and every aspect of the system. Component as well as System Testing is performed to test the system thoroughly. The newly added Alarm Component, the modified Floor Panel which includes the External Alarm and the modified Algorithm Component are the major focus of testing in this specification document.

The Component level testing includes -

* **Black box testing:** For testing the functionality of each component. Black box testing techniques used are –

1. Equivalence Partitioning
2. Decision Table based testing.

* **White box testing:** For testing the inner working of each component. White box testing techniques used are –

1. State based White Box testing
2. Branch based testing

System level testing includes -

* **Black box testing:** For testing the functionality of the entire Elevator system. Black box testing techniques used are –

1. Equivalence Partitioning
2. Decision Table based testing.

The Test Cases distribution and classification is as follows –

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Component** | **Test Type** | **Test Method** | **# of Test Cases for User Panel with Internal Alarm Component** | | | |
| **Reused** | **Changed** | **Added** | **Deleted** |
| User Panel with Internal Alarm Component | Black Box | Equivalence Partitioning | 3 | 4 | 7 | 7 |
| Decision Table | 3 | 2 | 9 | 5 |
| White Box | State Based | 11 | 0 | 3 | 0 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Component/ System** | **Test Type** | **Test Method** | **# of Test Cases** | | | |
| **Reused** | **Changed** | **Added** | **Deleted** |
| Algorithm | Black Box | Equivalence Partitioning | 0 | 0 | 10 | 0 |
| Decision Table based | 0 | 0 | 9 | 0 |
| White Box | Branch Based | 0 | 0 | 4 | 0 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Component/ System** | **Test Type** | **Test Method** | **# of Test Cases** | | | |
| **Reused** | **Changed** | **Added** | **Deleted** |
| Floor Panel with External Alarm | Black Box | Equivalence Partitioning | 8 | 0 | 2 | 0 |
| Decision Table based | 4 | 2 | 2 | 1 |
| White Box | State Based | 7 | 0 | 2 | 0 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Component/ System** | **Test Type** | **Test Method** | **# of Test Cases** | | | |
| **Reused** | **Changed** | **Added** | **Deleted** |
| System Function | Black Box | Equivalence Partitioning | 25 | 0 | 6 | 6 |
| Decision Table based | 12 | 7 | 27 | 11 |

**Figure: Test case distribution for Internal alarm with User Panel component**

**Figure: Test case distribution for External alarm with Floor Panel component**

**Figure: Test case distribution for Algorithm component**

**Figure: Test case distribution for System Funtion testing**

## Graphical Representation of Test Cases - Test Design Method wise

The Test Cases distribution and classification is as follows –

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Component** | **Test Type** | **Test Method** | **# of Test Cases for User Panel with Internal Alarm Component** | | | |
| **Reused** | **Changed** | **Added** | **Deleted** |
| User Panel Alarm | White Box | State Based | 10 | 0 | 4 | 0 |
| Floor Panel Alarm | White Box | State Based | 7 | 0 | 2 | 0 |

**Graphical Representation of Test case distribution - based on the Test Design Method for White Box testing of User Panel with Internal Alarm Component and Floor Panel with external Alarm**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Component** | **Test Type** | **Test Method** | **# of Test Cases for User Panel with Internal Alarm Component** | | | |
| **Reused** | **Changed** | **Added** | **Deleted** |
| Algorithm | White Box | Branch Based | 0 | 0 | 4 | 0 |

**Graphical Representation of Test case distribution - based on the Test Design Method for White Box testing of Algorithm Component**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Component** | **Test Type** | **Test Method** | **# of Test Cases for User Panel with Internal Alarm Component** | | | |
| **Reused** | **Changed** | **Added** | **Deleted** |
| User Panel with Internal Alarm | Black Box | Equivalence Partitioning | 3 | 4 | 7 | 7 |
| Black Box | Decision Table | 3 | 2 | 9 | 5 |

**Graphical Representation of Test case distribution - based on the Test Design Method for Black Box testing of User Panel with Internal Alarm Component**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Component** | **Test Type** | **Test Method** | **# of Test Cases for Floor Panel with External Alarm Component** | | | |
| **Reused** | **Changed** | **Added** | **Deleted** |
| Floor Panel with External Alarm | Black Box | Equivalence Partitioning | 8 | 0 | 2 | 0 |
| Black Box | Decision Table | 4 | 2 | 4 | 1 |

**Graphical Representation of Test case distribution - based on the Test Design Method for Black Box testing of Floor Panel with External Alarm Component**

## Test Case Summary

##### White Box Testing –State Based : User Panel With Internal Alarm Component

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case ID** | **Version No.** | **Test case Description** | **Tester Name** | **Test Date** |
| WB-SB-01 | 1.2 | Validate userpanel configuration | Bindiya Thomas |  |
| WB-SB-02 | 1.2 | Validate userpanel configuration | Bindiya Thomas |  |
| WB-SB-03 | 1.2 | Validate userpanel configuration | Bindiya Thomas |  |
| WB-SB-04 | 1.2 | Validate floor numbers being added to the up and down user panel queue | Bindiya Thomas |  |
| WB-SB-05 | 1.2 | Validate that the user panel queue is dequeueing. | Bindiya Thomas |  |
| WB-SB-06 | 1.2 | Validate that the user panel queue is enqueueing. | Bindiya Thomas |  |
| WB-SB-07 | 1.2 | Validate that the user panel queue is dequeueing and the queue is set to empty. | Bindiya Thomas |  |
| WB-SB-08 | 1.2 | Validate that the user panel queue is dequeueing and the queue is set to empty. | Bindiya Thomas |  |
| WB-SB-09 | 1.2 | Validate that user panel queue is dequeueing and puting the car from active to stop state. | Bindiya Thomas |  |
| WB-SB-10 | 1.2 | Validate that when user panel queue is empty the car status should be idle. | Bindiya Thomas |  |
| WB-SB-11 | 1.2 | Validate that the user panel queue is enqueueing. | Bindiya Thomas |  |
| WB-SB-12 | 1.2 | Validate that Alarm ON and OFF buttons function as expected . | Bindiya Thomas |  |
| WB-SB-13 | 1.2 | Validate that Alarm OFF button press moves car state to IDLE. | Bindiya Thomas |  |
| WB-SB-14 | 1.2 | Validate that Alarm ON press causes Car status to be ALARM\_PRESSED and Alarm OFF press moves Car Status to IDLE. | Bindiya Thomas |  |

##### Black Box Testing -Equivalence Partition Based : User Panel With Internal Alarm Component

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test Case Result** | | | | | | |
| **Testing Type** | | | **Product Name** | | | |
| Black Box - Equivalence Partition | | | Elevator System | | | |
| **Test Case ID** | **Version No.** | **Test case Description** | **Result** | **Tester Name** | **Test Date** | **Comments** |
| BB-UP-EP-1 | 1.2 | Test " Show Elevator " Button without selecting any other option |  | Deepshikha Koul |  |  |
| BB-UP-EP-2 | 1.2 | Test " Show Elevator " Button with selected floor numbers , user panel button color, pressed button color options |  | Deepshikha Koul |  |  |
| BB-UP-EP-3 | 1.2 | Test Select Alarm Type option for symbol configuration |  | Deepshikha Koul |  |  |
| BB-UP-EP-4 | 1.2 | Test Select Alarm Type Option for Text Configuration |  | Deepshikha Koul |  |  |
| BB-UP-EP-5 | 1.2 | Test User Panel buttons when no buttons are pressed |  | Deepshikha Koul |  |  |
| BB-UP-EP-6 | 1.2 | Test User Panel floor number buttons when no Floor buttons are pressed |  | Deepshikha Koul |  |  |
| BB-UP-EP-7 | 1.2 | Test User Panel floor number buttons without pressing any alarm buttons |  | Deepshikha Koul |  |  |
| BB-UP-EP-8 | 1.2 | Test User Panel floor number buttons after pressing Alarm On Button |  | Deepshikha Koul |  |  |
| BB-UP-EP-9 | 1.2 | Test User Panel floor number buttons after Alarm on and Alarm off buttons have been pressed |  | Deepshikha Koul |  |  |
| BB-UP-EP-10 | 1.2 | Test User Panel floor number buttons after and before Alarm On and Off buttons are pressed |  | Deepshikha Koul |  |  |
| BB-UP-EP-11 | 1.2 | Test Alarm On button is working |  | Deepshikha Koul |  |  |
| BB-UP-EP-12 | 1.2 | Test Alarm Off Button before pressing Alarm On button |  | Deepshikha Koul |  |  |
| BB-UP-EP-13 | 1.2 | Test Alarm Off button after Alarm On button has been pressed |  | Deepshikha Koul |  |  |
| BB-UP-EP-14 | 1.2 | Test Alarm Off button after User Panel floor number button has been pressed |  | Deepshikha Koul |  |  |

##### Black Box Testing -Decision Table Based : User Panel With Internal Alarm Component

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test Case Result** | | | | | | |
| **Testing Type** | | | **Product Name** | | | |
| Black Box - Decision Table | | | Elevator System | | | |
| **Test Case ID** | **Version No.** | **Test case Description** | **Result** | **Tester Name** | **Test Date** | **Comments** |
| BB-UP-DT-1 | 1.2 | Test " Show Elevator " Button without selecting any other option |  | Deepshikha Koul |  |  |
| BB-UP-DT-2 | 1.2 | Test " Show Elevator " Button with selected options |  | Deepshikha Koul |  |  |
| BB-UP-DT-3 | 1.2 | Test "User Panel Floor number" buttons with just Floor button selected |  | Deepshikha Koul |  |  |
| BB-UP-DT-4 | 1.2 | Test "User Panel Floor number" buttons with Alarm Configuration chosen as symbol |  | Deepshikha Koul |  |  |
| BB-UP-DT-5 | 1.2 | Test "User Panel Floor number" buttons with Alarm Configuration chosen as Text |  | Deepshikha Koul |  |  |
| BB-UP-DT-6 | 1.2 | Test "Alarm On" buttons in Alarm Type - Symbol Configuration after pressing the User Panel: Floor Buttons |  | Deepshikha Koul |  |  |
| BB-UP-DT-7 | 1.2 | Test "Alarm On" buttons in Alarm Type - Symbol Configuration |  | Deepshikha Koul |  |  |
| BB-UP-DT -8 | 1.2 | Testing "AlarmOff" button after pressing Alarm On button |  | Deepshikha Koul |  |  |
| BB-UP-DT-9 | 1.2 | Testing User panel floor number Buttons pressed after Alarm On , Alarm Off buttons and user panel floor number buttons are pressed |  | Deepshikha Koul |  |  |
| BB-UP-DT-10 | 1.2 | Test " Alarm On" button for alarm configuration selected as Text |  | Deepshikha Koul |  |  |
| BB-UP-DT-11 | 1.2 | Test Alarm off button after pressing alarm on and user panel floor number buttons |  | Deepshikha Koul |  |  |
| BB-UP-DT-12 | 1.2 | Testing User panel floor number buttons after pressing user panel floor number and alarm on button |  | Deepshikha Koul |  |  |
| BB-UP-DT-13 | 1.2 | Test User Panel Floor number buttons after pressing User panel floor numbers ,Alarm on and Alarm off buttons for Alarm configuration - Text |  | Deepshikha Koul |  |  |
| BB-UP-DT-14 | 1.2 | Test User Panel floor number buttons after pressing Alarm On and Alarm Off buttons for alarm type configuration as symbol |  | Deepshikha Koul |  |  |

##### White Box Testing –State Based : Floor Panel With Internal Alarm Component

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case ID** | **Version No.** | **Test case Description** | **Tester Name** | **Test Date** |
| WB-SB-FP-01 | 1.2 | Validate that the dequeued function for dequeueing the floor number is working. S0-T01-S1-T12-S2-T08-S8-T89-S9**.** | Bindiya Thomas |  |
| WB-SB-FP-02 | 1.2 | Validate that the floor panel queue reaches the empty state.  S0-T01-S1-T12-S2-T08-S8-T89-S9**.** | Bindiya Thomas |  |
| WB-SB-FP-03 | 1.2 | When the user presses the up button in the floor panel, the request is put into the floor panel queue. The floor panel is set to active state and the button color is activated i.e. configured **.** S0 -T07-S7**-**T72-S2**,** S0 -T07-S7-T73-S3 | Bindiya Thomas |  |
| WB-SB-FP-04 | 1.2 | When the user presses the up button in the floor panel, the request is put into the floor panel queue. Floor panel update the floor indicator status.  S0 - T07- S7-T74-S4-T74a-S4a | Bindiya Thomas |  |
| WB-SB-FP-05 | 1.2 | When the user presses the up/down button in the floor panel, The floor indicator gets configurable. Panel is set to active state.  S0-T01-S1-T13a-S3a**,** S0 -T07-S7-T73a-S3a | Bindiya Thomas |  |
| WB-SB-FP-06 | 1.2 | When the user presses the up button in the floor panel, the request is put into the floor panel queue and the command is processed. After command processed button color is turns to its original color.  s0-T07- s7-T74- s4-T410- s10-T105- s5, s0 –T07-s7-T74 -s4-T410- s10-T106- s6 | Bindiya Thomas |  |
| WB-SB-FP-07 | 1.2 | When the user presses the down button in the floor panel, the request is put into the floor panel queue and the command is processed. After command processed button color is turns button color is turn to its previous color.  S0-T01- S1-T14- S4-T411- S11-T115-S5, S0-T01- S1-T14- S4-T411- S11-T115-S6 | Bindiya Thomas |  |
| WB-SB-FP-08 | 1.2 | Validating if pressing the Alarm OFF button in the User Panel changes the Indication in the floor panel for the appropriate floor and car.  S0-T013-S13-T1314-S14-T1416-S16-T162-S2 | Bindiya Thomas |  |
| WB-SB-FP-09 | 1.2 | Validating if pressing the Alarm ON button in User Panel shows Elevator Stuck in the Appropriate floor and car.  S0-T013-S13-T1315-S15-T155-S5 | Bindiya Thomas |  |

##### Black Box Testing –Equivalence Partitioning : Floor Panel with External Alarm

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test Case Result** | | | | | | |
| **Testing Type** | | | **Product Name** | | | |
| Black Box - Equivalence Partition | | | Elevator System | | | |
| **Test Case ID** | **Version #** | **Test case Description** | **Pass/Fail** | **Tester Name** | **Test Date** | **Comments** |
| BB-FP-EP-1 | 1.2 | Test “UP” button of the top most floor of the floor panel. |  | Nimma Hemanth |  |  |
| BB-FP-EP-2 | 1.2 | Test “DOWN” button on lowest floor of the floor panel. |  | Nimma Hemanth |  |  |
| BB-FP-EP-3 | 1.2 | Test “UP” button on the floor panel |  | Nimma Hemanth |  |  |
| BB-FP-EP-4 | 1.2 | Test “Down” button on the floor panel |  | Nimma Hemanth |  |  |
| BB-FP-EP-5 | 1.2 | Test “UP” and “DOWN” buttons of any middle floor on the floor panel on the floor panel |  | Nimma Hemanth |  |  |
| BB-FP-EP-6 | 1.2 | Press the “UP” or “DOWN” buttons of any middle floor. |  | Nimma Hemanth |  |  |
| BB-FP-EP-7 | 1.2 | Press the “UP” or “DOWN” buttons of any middle floor once more. |  | Nimma Hemanth |  |  |
| BB-FP-EP-8 | 1.2 | Test Floor Indicator when car is moving |  | Nimma Hemanth |  |  |
| BB-FP-EP-9 | 1.2 | Test Floor panel when no up/down button is pressed |  | Nimma Hemanth |  |  |

##### Black Box Testing –Decision Table: Floor Panel with External Alarm

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test Case Result** | | | | | | |
| **Testing Type** | | | **Product Name** | | | |
| Black Box – Decision Table | | | Elevator System | | | |
| **Test Case ID** | **Version#** | **Test case Description** | **Pass/Fail** | **Tester Name** | **Test Date** | **Comments** |
| BB-FP-DT-1 | 1.2 | Test “UP” button of the top most floor of the floor panel. |  | Nimma Hemanth |  |  |
| BB-FP-DT-2 | 1.2 | Test “UP” button of the floor panel for any floor other than the top floor |  | Nimma Hemanth |  |  |
| BB-FP-DT-3 | 1.2 | Test “DOWN” button on the floor panel for the bottom floor |  | Nimma Hemanth |  |  |
| BB-FP-DT-4 | 1.2 | Test “DOWN” button on the floor panel when floor not in the bottom floor |  | Nimma Hemanth |  |  |
| BB-FP-DT-5 | 1.2 | Test “UP” button is pressed when elevator is moving. |  | Nimma Hemanth |  |  |
| BB-FP-DT-6 | 1.2 | Test “DOWN” button pressed when elevator is moving. |  | Nimma Hemanth |  |  |
| BB-FP-DT-7 | 1.2 | Test Pressing the “UP” and “DOWN” button on the floor panel one after another when car is moving. |  | Nimma Hemanth |  |  |
| BB-FP-DT-8 | 1.2 | Test the floor panel when no activity has been performed. |  | Nimma Hemanth |  |  |

##### White Box Testing –Branch based : Algorithm

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test Case Result** | | | | | | |
| **Testing Type** | | | **Product Name** | | | |
| White Box Testing – Branch Based | | | Elevator System | | | |
| **Test Case ID** | **Version #** | **Test case Description** | **Pass/Fail** | **Tester Name** | **Test Date** | **Comments** |
| WB-AL-BB-01 | 1.2 | Testing what happens to a user car in case of Least Recently used algorithm for a non empty queue - Car is not null. |  | Snigdha |  |  |
| WB-AL-BB-02 | 1.2 | Testing what happens to a user car in case of Least Recently used algorithm for a non empty queue - Car is equal to null. |  | Snigdha |  |  |
| WB-AL-BB-03 | 1.2 | Testing what happens to a user car in case of Least Recently used algorithm for a empty queue of cars |  | Snigdha |  |  |
| WB-AL-BB-04 | 1.2 | Testing what happens if any least recently algorithm is not used |  | Snigdha |  |  |

##### Black Box Testing –Equivalence Partitioning : **Algorithm**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test Case Result** | | | | | | |
| **Testing Type** | | | **Product Name** | | | |
| Black Box Testing – Equivalence Partitioning | | | Elevator System | | | |
| **Test Case ID** | **Version #** | **Test case Description** | **Pass/Fail** | **Tester Name** | **Test Date** | **Comments** |
| BB-AL-EP-01 | 1.2 | Testing the Least recently used elevator algorithm - None of the cars are being used |  | Snigdha |  |  |
| BB-AL-EP-02 | 1.2 | Testing the Least recently used elevator algorithm - Cars less than the total number of available cars are being used |  | Snigdha |  |  |
| BB-AL-EP-03 | 1.2 | Testing the Least recently used elevator algorithm - All the cars are being used |  | Snigdha |  |  |
| BB-AL-EP-04 | 1.2 | Testing the Shortest Path elevator algorithm - No car is being used |  | Snigdha |  |  |
| BB-AL-EP-05 | 1.2 | Testing the Shortest Path elevator algorithm - Cars less than the total number of cars is being used |  | Snigdha |  |  |
| BB-AL-EP-06 | 1.2 | Testing the Shortest Path elevator algorithm - All the cars are being used |  | Snigdha |  |  |
| BB-AL-EP-07 | 1.2 | Testing the Shortest Path elevator algorithm - Cars less than the total number of cars is being used |  | Snigdha |  |  |
| BB-AL-EP-08 | 1.2 | Testing the Random elevator algorithm - None of the cars are used |  | Snigdha |  |  |
| BB-AL-EP-09 | 1.2 | Testing the Random elevator algorithm - Cars less than the total number of cars are being used |  | Snigdha |  |  |
| BB-AL-EP-10 | 1.2 | Testing the Random elevator algorithm - All the cars are used |  | Snigdha |  |  |

##### **Black Box Testing –Decision Table: Algorithm**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test Case Result** | | | | | | |
| **Testing Type** | | | **Product Name** | | | |
| Black Box Testing – Decision Table | | | Elevator System | | | |
| **Test Case ID** | **Version#** | **Test case Description** | **Pass/Fail** | **Tester Name** | **Test Date** | **Comments** |
| BB-AL-DT-01 | 1.2 | Check car selection using Random Algorithm when Up button is pressed. |  | Snigdha |  |  |
| BB-AL-DT-02 | 1.2 | Check car selection using Random Algorithm when Down button is pressed. |  | Snigdha |  |  |
| BB-AL-DT-03 | 1.2 | Check car selection using Random Algorithm when Up button is pressed first and then the Down button is pressed. |  | Snigdha |  |  |
| BB-Al-DT-04 | 1.2 | Check car selection using Shortest Path Algorithm when Up button is pressed. |  | Snigdha |  |  |
| BB-AL-DT-05 | 1.2 | Check car selection using Shortest Path Algorithm when Down button is pressed. |  | Snigdha |  |  |
| BB-AL-DT-06 | 1.2 | Check car selection using Shortest Path Algorithm when Up button is pressed first and then the Down button is pressed. |  | Snigdha |  |  |
| BB-AL-DT-07 | 1.2 | Check car selection using Least Recently Used Algorithm when Up button is pressed. |  | Snigdha |  |  |
| BB-AL-DT-08 | 1.2 | Check car selection using Least Recently Used Algorithm when Down button is pressed. |  | Snigdha |  |  |
| BB-AL-DT-09 | 1.2 | Check car selection using Least Recently Used Algorithm when Up button is pressed first and then the Down button is pressed. |  | Snigdha |  |  |

##### **System Testing –***Equivalence Partitioning*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test Case Result** | | | | | | |
| **Testing Type** | | | **Product Name** | | | |
| System Testing – Equivalence Partitioning | | | Elevator System | | | |
| **Test Case ID** | **Version No.** | **Test case Description** | **Pass/Fail** | **Tester Name** | **Test Date** | **Comments** |
| ST-EP-01 | 1.2 | To check the result on pressing the floor panel UP button |  | Bindiya |  |  |
| ST-EP-02 | 1.2 | To check the Up button is disabled for top level |  | Bindiya |  |  |
| ST-EP-03 | 1.2 | To check color when button is pressed |  | Bindiya |  |  |
| ST-EP-04 | 1.2 | Up button color when pressed from the top floor. |  | Bindiya |  |  |
| ST-EP-05 | 1.2 | UP button color changes to original when car reaches the destination |  | Bindiya |  |  |
| ST-EP-06 | 1.2 | Up button color changes on the top floor |  | Bindiya |  |  |
| ST-EP-07 | 1.2 | To check the result on pressing the floor panel Down button. |  | Bindiya |  |  |
| ST-EP-08 | 1.2 | To check the Down button is disabled for Bottom level |  | Bindiya |  |  |
| ST-EP-09 | 1.2 | To check the color when button is pressed |  | Bindiya |  |  |
| ST-EP-10 | 1.2 | Down button color when pressed from the Bottom floor |  | Bindiya |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| ST-EP-11 | 1.2 | Down button color changes to original when car reaches the destination |  | Bindiya |  |  |
| ST-EP-12 | 1.2 | Down button color changes on the Bottom floor |  | Bindiya |  |  |
| ST-EP-13 | 1.2 | To check the Open button |  | Bindiya |  |  |
| ST-EP-14 | 1.2 | To check the invalid input for open button |  | Bindiya |  |  |
| ST-EP-15 | 1.2 | Check the open button for door panel |  | Bindiya |  |  |
| ST-EP-16 | 1.2 | To check the invalid input for open button |  | Bindiya |  |  |
| ST-EP-17 | 1.2 | To check the Close button |  | Bindiya |  |  |
| ST-EP-18 | 1.2 | To check the invalid input for close button |  | Bindiya |  |  |
| ST-EP-19 | 1.2 | Check the close button for door panel |  | Bindiya |  |  |
| ST-EP-20 | 1.2 | To check an invalid input at door panel |  | Bindiya |  |  |
| ST-EP-21 | 1.2 | To check the User Panel floor button |  | Bindiya |  |  |
| ST-EP-22 | 1.2 | To check redundancy in pressing a button |  | Bindiya |  |  |
| ST-EP-23 | 1.2 | To check invalid input for floor button |  | Bindiya |  |  |
| ST-EP-24 | 1.2 | To check the button color for floor button |  | Bindiya |  |  |
| ST-EP-25 | 1.2 | Check the invalid input for floor button |  | Bindiya |  |  |
| ST-EP-26 | 1.2 | Press Alarm ON button when car is moving |  | Bindiya |  |  |
| ST-EP-27 | 1.2 | Press Alarm ON button when car is stationary |  | Bindiya |  |  |
| ST-EP-28 | 1.2 | Press Alarm OFF button when alarm is ON. |  | Bindiya |  |  |
| ST-EP-29 | 1.2 | Press Alarm OFF button when alarm is already OFF. |  | Bindiya |  |  |
| ST-EP-30 | 1.2 | Press User Panel floor buttons when alarm is ON |  | Bindiya |  |  |
| ST-EP-31 | 1.2 | Select algorithm from among Random, Shortest Path or Least Recently Used |  | Bindiya |  |  |
| ST-EP-32 | 1.2 | Unable to select algorithm type of Select any other algorithm type |  | Bindiya |  |  |

##### **System Testing –***Decision Table*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test Case Result** | | | | | | |
| **Testing Type** | | | **Product Name** | | | |
| System Testing – Decision Table | | | Elevator System | | | |
| **Test Case ID** | **Version No.** | **Test case Description** | **Pass/Fail** | **Tester Name** | **Test Date** | **Comments** |
| ST-DT-01 | 1.2 | Check if the system remains IDLE if the show Elevator Button is not pressed | Pass | Bindiya | 11/14/2011 |  |
| ST-DT-02 | 1.2 | Check if the User Panel and floor Panel change when changes are made in Admin Console | Fail | Bindiya | 11/14/2011 | Issue 16,  Issue 15 |
| ST-DT-03 | 1.2 | Check if the User Panel changes if the number of cars is changed | Pass | Bindiya | 11/14/2011 |  |
| ST-DT-04 | 1.2 | Check if the Floor Panel changes if the number of floors is changed | Pass | Bindiya | 11/14/2011 |  |
| ST-DT-05 | 1.2 | Check if the User Panel and Floor Panel changes if the number of cars and floors is changed | Fail | Bindiya | 11/14/2011 | Issue 11 |
| ST-DT-6 | 1.2 | Check the usage output for User Panel inputs when only Lower floor number button is pressed | Fail | Bindiya | 11/14/2011 | Issue 12 |
| ST-DT-7 | 1.2 | Check the usage output for only Floor Panel | Pass | Bindiya | 11/14/2011 |  |
| ST-DT-8 | 1.2 | Check the usage output for Floor Panel inputs when all current, higher and lower floor UP/DOWN buttons are pressed | Pass | Bindiya | 11/14/2011 |  |
| ST-DT-9 | 1.2 | Check the usage output for Floor Panel inputs when current and higher floor UP/DOWN buttons are pressed | Pass | Bindiya | 11/14/2011 |  |
| ST-DT-10 | 1.2 | Check the usage output for Floor Panel inputs when all current and lower floor UP/DOWN buttons are pressed on floor panel | Pass | Bindiya | 11/14/2011 |  |
| ST-DT-11 | 1.2 | Check the usage output for Floor Panel inputs when only current floor UP/DOWN buttons are pressed | Pass | Bindiya | 11/14/2011 |  |
| ST-DT-12 | 1.2 | Check the usage output for Floor Panel inputs when Higher and lower floor UP/DOWN buttons are pressed on User Panel one after another | Fail | Bindiya | 11/14/2011 | Issue 9 |
| ST-DT-13 | 1.2 | To check which car answers the call when an up/down button is pressed with the floor no. above the car floor | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-14 | 1.2 | To check which car answers the call when an up/down button is pressed with the floor no. below the car floor | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-15 | 1.2 | To check which car answers the call when an car is in its lowest floor and up/down button is pressed from the same floor | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-16 | 1.2 | To check which car answers the call when an car is in its highest floor and up/down button is pressed from the same floor | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-17 | 1.2 | On pressing the highest floor panel button, then lowest button from user panel, then second lowest button from user panel the floor number inside the car of the elevator system goes into the infinite loop. | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-18 | 1.2 | : On pressing the highest User panel button, then lowest button from floor panel, then second lowest button from floor panel the floor number inside the car of the elevator system  goes into the infinite loop | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-19 | 1.2 | Check the change in appearance of user Panel when alarm button is pressed | Pass | Bindiya | 11/14/2011 |  |
| ST-DT-20 | 1.2 | Check the change in appearance of user Panel when alarm OFF button is pressed without pressing the Alarm ON button | Pass | Bindiya | 11/14/2011 |  |
| ST-DT-21 | 1.2 | check for how the up button works when pressed on the floor panel on the top most floor | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-22 | 1.2 | Check for how the down button works on the floor panel on the bottom most floor | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-23 | 1.2 | check for how the up button works when pressed on the floor panel | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-24 | 1.2 | Check for how the down button works on the floor panel | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-25 | 1.2 | Check how the up button work while the elevator is moving. | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-26 | 1.2 | Check how the down button works while the elevator is moving. | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-27 | 1.2 | check whether the system remains idle when no up/down button is pressed in the floor panel | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-28 | 1.2 | Check whether the alarm indicator status is turned on in the floor panel when the alarm on button is pressed in the user panel | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-29 | 1.2 | Check whether the alarm indicator status is turned off in the floor panel when the Alarm off button is pressed in the user panel | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-30 | 1.2 | Check how the up/down button pressed on a floor work when the alarm on button is pressed in one of the car | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-31 | 1.2 | Check how the up/down button pressed on a floor on which the car got stuck work. | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-32 | 1.2 | Check how the up/down button pressed on any floor work when all the cars are stuck. | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-33 | 1.2 | To check how the UP/Down button pressed on the floor panel work when Alarm off is pressed in the car. | Pass | Hemanth | 11/8/2011 |  |
| ST-DT-34 | 1.2 | To check how the UP/Down button pressed on the floor panel work when Alarm off is pressed in all the cars | Fail | Hemanth | 11/8/2011 | Issue 17 |
| ST-DT-35 | 1.2 | To check how the UP/Down button pressed on the floor on which the alarm off button is pressed for the car work. | Fail | Hemanth | 11/8/2011 | Issue 18 |
| ST-DT-36 | 1.2 | Check the change in appearance of user Panel when alarm OFF button is pressed after pressing the Alarm ON button | Pass | Bindiya | 11/14/2011 |  |

# Appendix

#### Deleted Test Cases for - User Panel with Internal Alarm component - Decision Table

|  |  |
| --- | --- |
| **Tested Case ID:** BB-DT-06 | **Test Item:** User Panel |
| **Wrote by:** Rajiv Deshmukh | **Documented Date:** 3/26/2011 |
| **Test Type:** Black Box Testing | **Test Suite #:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No:**1.1 |
| **Test case Description:**  Check the output for User Panel component inputs on User Panel | |
| **Operation procedure:**  The Main.java file is run and a new frame opens which takes input from the user and press OK button. | |
| **Pre-Conditions :**  From User Panel component, run Main.java. Click Ok to get another user panel interface. | **Post Condition:**  Another UI of odd numbered floors should appear and the color should be as specified by the user input. |
| **Specifications:** | |
| **Input:**   * Ok button is pressed after filling all input parameters including odd user panel type for buttons on User Panel | **Expected Output:**   * Another interface with odd number floors’ button will appear with the desired color configuration. |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

|  |  |
| --- | --- |
| **Tested Case ID:** BB-DT-05 | **Test Item:** User Panel |
| **Wrote by:** Rajiv Deshmukh | **Documented Date:** 3/26/2011 |
| **Test Type:** Black Box Testing | **Test Suite #:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No:**1.1 |
| **Test case Description:**  Check the output for User Panel component inputs on User Panel | |
| **Operation procedure:**  The Main.java file is run and a new frame opens which takes input from the user and press OK button. | |
| **Pre-Conditions :**  From User Panel component, run Main.java. Click Ok to get another user panel interface. | **Post Condition:**  Another UI of even numbered floors should appear and the color should be as specified by the user input. |
| **Specifications:** | |
| **Input:**   * Ok button is pressed after filling all input parameters including even user panel type for buttons on User Panel | **Expected Output:**   * Another interface with even number floors’ button will appear with the desired color configuration. |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

|  |  |
| --- | --- |
| **Tested Case ID:** BB-DT-07 | **Test Item:** User Panel |
| **Wrote by:** Rajiv Deshmukh | **Documented Date:** 3/26/2011 |
| **Test Type:** Black Box Testing | **Test Suite #:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No:** 1.1 |
| **Test case Description:**  Check the output for User Panel component inputs on User Panel | |
| **Operation procedure:**  The Main.java file is run and a new frame opens which takes input from the user and press OK button. | |
| **Pre-Conditions :**  From User Panel component, run Main.java. Click Ok to get another user panel interface. | **Post Condition:**  Another UI of sequential numbered floors should appear and the color should be as specified by the user input. |
| **Specifications:** | |
| **Input:**   * Ok button is pressed after filling all input parameters excluding the user panel type for buttons on User Panel | **Expected Output:**   * Another interface with sequential number floors’ button will appear as it is the default type with the desired color configuration. |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

|  |  |
| --- | --- |
| **Tested Case ID:** BB-DT-08 | **Test Item:** User Panel |
| **Wrote by:** Rajiv Deshmukh | **Documented Date:** 3/26/2011 |
| **Test Type:** Black Box Testing | **Test Suite #:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No:**1.1 |
| **Test case Description:**  Check the output for User Panel component inputs on User Panel | |
| **Operation procedure:**  The Main.java file is run and a new frame opens which takes input from the user and press OK button. | |
| **Pre-Conditions :**  From User Panel component, run Main.java. Click Ok to get another user panel interface. | **Post Condition:**  Another UI of odd numbered floors should appear and the color should be as specified by the user input. |
| **Specifications:** | |
| **Input:**   * Ok button is pressed after filling all input parameters and selecting car type as default. | **Expected Output:**   * Another interface with the desired color configuration will appear. |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

|  |  |
| --- | --- |
| **Tested Case ID:** ST-DT-09 | **Test Item:** User Panel |
| **Wrote by:** Rajiv Deshmukh | **Documented Date:** 3/26/2011 |
| **Test Type:** Black Box Testing | **Test Suite #:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No:**1.1 |
| **Test case Description:**  Check the output for User Panel component inputs on User Panel | |
| **Operation procedure:**  The Main.java file is run and a new frame opens which takes input from the user and press OK button. | |
| **Pre-Conditions :**  From User Panel component, run Main.java. Click Ok to get another user panel interface. | **Post Condition:**  Another UI of odd numbered floors should appear and the color should be as specified by the user input. |
| **Specifications:** | |
| **Input:**   * Ok button is pressed after filling all input parameters and selecting User panel queue type as default. | **Expected Output:**   * Another interface with the desired color configuration will appear. |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

#### Deleted Test Cases for - User Panel with Internal Alarm component - Equivalence Partitioning

|  |  |
| --- | --- |
| **Tested Case ID:** BB-EP-04 | **Test Item:** User Panel |
| **Wrote by:** Rajiv Deshmukh | **Documented Date:** 3/28/2011 |
| **Test Type:** Black Box Testing | **Test Suite #:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No:**1.1 |
| **Test case Description:**  To check the Button Color in Configuration UI. | |
| **Operation procedure:**  Select the button color in Configuration UI for the panel and click OK button. | |
| **Pre-Conditions :**  Open Configuration UI | **Post Condition:**  Display User Panel UI |
| **Specifications:** | |
| **Input:**   * A color is selected from the drop down box | **Expected Output:**   * User Panel UI shows respective color as selected. |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

|  |  |
| --- | --- |
| **Tested Case ID:** BB-EP-05 | **Test Item:** User Panel |
| **Wrote by:** Rajiv Deshmukh | **Documented Date:** 2/20/2011 |
| **Test Type:** Black Box Testing | **Test Suite #:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No:**1.1 |
| **Test case Description:**  To check the Button Color in Configuration UI | |
| **Operation procedure:**  Select the button color in Configuration UI for the panel and click OK button. | |
| **Pre-Conditions :**  Open Configuration UI | **Post Condition:**  Display User Panel UI |
| **Specifications:** | |
| **Input:**   * No color is selected from the drop down box. | **Expected Output:**   * User Panel UI shows Red color as default color. |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

|  |  |
| --- | --- |
| **Tested Case ID:** BB-EP-06 | **Test Item:** User Panel |
| **Wrote by:** Rajiv Deshmukh | **Documented Date:** 3/28/2011 |
| **Test Type:** Black Box testing | **Test Suite #:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No:**1.1 |
| **Test case Description:**  To check the Button Color in Configuration UI | |
| **Operation procedure:**  Select the button color in Configuration UI for the panel and click OK button. | |
| **Pre-Conditions :**  Open Configuration UI | **Post Condition:**  Display User Panel UI |
| **Specifications:** | |
| **Input:**   * More than one color are selected from the menu. | **Expected Output:**   * N/A |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| **Tested Case ID:** BB-EP-11 | **Test Item:** User Panel |
| **Wrote by:** Rajiv Deshmukh | **Documented Date:** 3/28/2011 |
| **Test Type:** Black Box Testing | **Test Suite #:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No:**1.1 |
| **Test case Description:**  To check the User panel type selection in User Panel UI. | |
| **Operation procedure:**  Select the panel type in Configuration UI and click OK button. | |
| **Pre-Conditions :**  Open Configuration UI | **Post Condition:**  Display User Panel UI. |
| **Specifications:** | |
| **Input:**   * Only one type is selected. | **Expected Output:**   * The type that is selected will be displayed. |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| **Tested Case ID:** BB-EP-12 | **Test Item:** User Panel |
| **Wrote by:** Rajiv Deshmukh | **Documented Date:** 3/28/2011 |
| **Test Type:** Black Box Testing | **Test Suite #:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No:**1.1 |
| **Test case Description:**  To check the User panel type selection in User Panel UI. | |
| **Operation procedure:**  Select the panel type in Configuration UI and click OK button. | |
| **Pre-Conditions :**  Open Configuration UI | **Post Condition:**  Display User Panel UI. |
| **Specifications:** | |
| **Input:**   * Only one type is selected. | **Expected Output:**   * The type that is selected will be displayed. |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| **Tested Case ID:** BB-EP-13 | **Test Item:** User Panel |
| **Wrote by:** Rajiv Deshmukh | **Documented Date:** 3/28/2011 |
| **Test Type:** Black Box Testing | **Test Suite #:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No:**1.1 |
| **Test case Description:**  To check the User panel type selection in User Panel UI. | |
| **Operation procedure:**  Do not select the panel type in Configuration UI and click OK button. | |
| **Pre-Conditions :**  Open Configuration UI | **Post Condition:**  Display User Panel UI. |
| **Specifications:** | |
| **Input:**   * Do not select the user panel type but select the remaining configuration. | **Expected Output:**   * The sequential type is selected by default with the remaining parameters. |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| **Tested Case ID:** BB-EP-03 | **Test Item:** User Panel |
| **Wrote by:** Rajiv Deshmukh | **Documented Date:** 3/28/2011 |
| **Test Type:** Black Box Testing | **Test Suite #:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No:**1.1 |
| **Test case Description:**  To check the number of floors in Configuration UI | |
| **Operation procedure:**  Enter the number of floors in Configuration UI for the elevator and press OK button. | |
| **Pre-Conditions :**  Open Configuration UI | **Post Condition:**  Display User Panel UI |
| **Specifications:** | |
| **Input:**   * No floors are selected | **Expected Output:**   * The User Panel shows two floors. |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

#### Deleted Test Cases for - Floor Panel with External Alarm component – Decision Table

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| --- | --- |
| **Test Case ID:** BB -DT-07 | **Test Item:** Floor Panel with floor indicator |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/23/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** When running the floor panel the boxes of floor indicator are editable. | |
| **Operation procedure:**   1. Run the floor panel. 2. Press any button on the floor panel.   3. The floor panel indicator gets updated.  4. typw something in other floor’s indicator. | |
| **Pre-conditions:**  Floor Panel is in active state. | **Post-conditions:**  Floor indicators are updated. |
| **Inputs data and/or events:**  User presses the UP or down button in the floor panel one after another. | **Expected output data and/or events:**  The floor indicator gets updated and floor indicator should not be editable. |

#### Deleted Test cases for Algorithm Component- Branch Based Testing:

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| --- | --- |
| **Test Case ID:** WB-BB-01 | **Test Item:** Algorithm |
| **Wrote By:** Pinky Shah | **Documented Date:** 04/01/2011 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description: Validating predicate node lstCars.size() == 1** | |
| **Operation procedure:**  1. Pass list of car to sorting algorithm. | |
| **Pre-conditions:**  User Panel Type : Sequential  Algorithm Type: Shortest Path  Number of Cars : 1 | **Post-conditions:**  Best Car to serve the request is found. |
| **Inputs data and/or events:**  List of Cars | **Expected output data and/or events:**  Car object returned. |
| **Required test scripts: -** None |  |

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| --- | --- |
| **Test Case ID:** WB-BB-02 | **Test Item:** Algorithm |
| **Wrote By:** Pinky Shah | **Documented Date:** 04/01/2011 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description: Validating predicate node i<lstCars.size() and pathlength predicate node to find best car.** | |
| **Operation procedure:**  1. Pass list of car to sorting algorithm.  2. Path length of first car is less then other cars.  3. First car is best car. | |
| **Pre-conditions:**  User Panel Type : Sequential, even, odd  Algorithm Type: Shortest Path  Number of Cars : >1 | **Post-conditions:**  Best Car to serve the request is found. |
| **Inputs data and/or events:**  List of Cars. | **Expected output data and/or events:**  Car object returned. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** WB-BB-03 | **Test Item:** Algorithm |
| **Wrote By:** Pinky Shah | **Documented Date:** 04/01/2011 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description: Validating predicate node i<lstCars.size() and pathlength predicate node to find best car.** | |
| **Operation procedure:**  1. Pass list of car to sorting algorithm.  2. Path length of first car is greater then other cars, so other car in list is best car.  3.Best car is found among other cars in list. | |
| **Pre-conditions:**  User Panel Type : Sequential,even,odd  Algorithm Type: Shortest Path  Number of Cars : >1 | **Post-conditions:**  Best Car to serve the request is found. |
| **Inputs data and/or events:**  List of Cars. | **Expected output data and/or events:**  Car object returned. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** WB-BB-4 | **Test Item:** Algorithm |
| **Wrote By:** Pinky Shah | **Documented Date:** 04/01/2011 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description: Validating predicate node i<lstCars.size().** | |
| **Operation procedure:**  1. Pass list of car to sorting algorithm.  2.Only two cars.  2.First car is best car or second car is best depending on path length. | |
| **Pre-conditions:**  User Panel Type : even,seq  Algorithm Type: Shortest Path  Number of Cars : =2 | **Post-conditions:**  Best Car to serve the request is found. |
| **Inputs data and/or events:**  List of Cars. | **Expected output data and/or events:**  Car object returned. |
| **Required test scripts: -** None |  |

Test Cases for above branch based testing method for Shortest path algorithm

partitionCars() function.

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| --- | --- |
| **Test Case ID:** WB-BB-05 | **Test Item:** Algorithm (partition function) |
| **Wrote By:** Pinky Shah | **Documented Date:** 04/01/2011 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description: Validating predicate node i<lstCars.size() and us.getSelection() == 1 and us.getSelection() == 2** | |
| **Operation procedure:**  1. Pass list of car to partitionCars() function.  2. Userpanel is of type odd so add to oddCarsList().  3. Userpanel is not of type even. | |
| **Pre-conditions:**  User Panel Type : Seq,odd  Algorithm Type: Shortest Path  Number of Cars : >1 | **Post-conditions:**  **List of Cars is updated.** |
| **Inputs data and/or events:**  List of Cars. | **Expected output data and/or events:**  Updated list of cars returned |
| **Required test scripts: -** None |  |

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| **Test Case ID:** WB-BB-06 | **Test Item:** Algorithm (partition function) |
| **Wrote By:** Pinky Shah | **Documented Date:** 04/01/2011 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description: Validating predicate node i<lstCars.size() and us.getSelection() == 1 and us.getSelection() == 2** | |
| **Operation procedure:**  1. Pass list of car to partitionCars() function.  2. Userpanel is of type even so add to evenCarsList().  3. Userpanel is not of type odd. | |
| **Pre-conditions:**  User Panel Type : Sequential,even  Algorithm Type: Shortest Path  Number of Cars : >1 | **Post-conditions:**  **List of Cars is updated.** |
| **Inputs data and/or events:**  List of Cars. | **Expected output data and/or events:**  Updated list of cars returned |
| **Required test scripts: -** None |  |

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| **Test Case ID:** WB-BB-07 | **Test Item:** Algorithm (partition function) |
| **Wrote By:** Pinky Shah | **Documented Date:** 04/01/2011 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description: Validating predicate node i<lstCars.size() and us.getSelection() == 1 and us.getSelection() == 2** | |
| **Operation procedure:**  1. Pass list of car to partitionCars() function.  2.Userpanel is not of type even and odd.  3.Userpanel is sequential so add to both list odd and even. | |
| **Pre-conditions:**  User Panel Type : Sequential,even,odd  Algorithm Type: Shortest Path  Number of Cars : >1 | **Post-conditions:**  **List of Cars is updated.** |
| **Inputs data and/or events:**  List of Cars. | **Expected output data and/or events:**  Updated list of cars returned |
| **Required test scripts: -** None |  |
| **Test Case ID:** WB-BB-08 | **Test Item:** Algorithm (partition function) |
| **Wrote By:** Pinky Shah | **Documented Date:** 04/01/2011 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Validating predicate node i<lstCars.size() and desitnationFloorNumber % 2 ==0 (check floor number even/odd) | |
| **Operation procedure:**  1. Pass list of car to partitionCars() function.  2. Partition List of car.  3. Request for even floor number.  4. Pass even list. | |
| **Pre-conditions:**  User Panel Type : Sequential,even  Algorithm Type: Shortest Path  Number of Cars : = 2  Destination Floor : 4 | **Post-conditions:**  List of Cars is updated. |
| **Inputs data and/or events:**  List of Cars. | **Expected output data and/or events:**  Updated list of cars returned |
| **Required test scripts: -** None |  |

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| **Test Case ID:** WB-BB-09 | **Test Item:** Algorithm (partition function) |
| **Wrote By:** Pinky Shah | **Documented Date:** 04/01/2011 |
| **Test Type:** White Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Validating predicate node i<lstCars.size() and desitnationFloorNumber % 2 ==0 (check floor number even/odd) | |
| **Operation procedure:**  1. Pass list of car to partitionCars() function.  2. Partition List of car.  3. Request for odd floor number.  4. Pass odd list. | |
| **Pre-conditions:**  User Panel Type : Sequential, odd  Algorithm Type: Shortest Path  Number of Cars : = 2  Destination Floor : 5 | **Post-conditions:**  **List of Cars is updated.** |
| **Inputs data and/or events:**  List of Cars. | **Expected output data and/or events:**  Updated list of cars returned |
| **Required test scripts: -** None |  |

#### Deleted Test Cases for System Function Test – Equivalence Partitioning

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| **Tested Case ID:** ST-EP-26 | **Test Item:** User Panel |
| **Wrote by:** Sweta Shah | **Documented Date:** 03/28/2011 |
| **Test Type:** Black Box | **Test Suite #:1.1** |
| **Product Name:** Elevator System | **Release and Version No:1.1** |
| **Test case Description:**  Check the valid input for all the floors | |
| **Operation Procedure:**Choose the Default/Sequential type of car | |
| **Pre-Conditions :**  Car type sequential selected | **Post Condition:**  The car goes to the desired floor |
| **Specifications:** | |
| **Input:** Any floor number pressed | **Expected Output:** The car goes to the floor pressed in the user panel |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| **Tested Case ID:** ST-EP-27 | **Test Item:** User Panel |
| **Wrote by:** Sweta Shah | **Documented Date:** 03/28/2011 |
| **Test Type:** Black Box | **Test Suite #:1.1** |
| **Product Name:** Elevator System | **Release and Version No:1.1** |
| **Test case Description:**  Check the invalid input for all the floors | |
| **Operation Procedure:**Choose the Default/Sequential type of car | |
| **Pre-Conditions :**  Car type sequential selected | **Post Condition:**  The car does not go to the desired floor |
| **Specifications:** | |
| **Input:** Any floor number pressed | **Expected Output:** The car does not go to the floor pressed in the user panel |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| **Tested Case ID:** ST-EP-28 | **Test Item:** User Panel |
| **Wrote by:** Sweta Shah | **Documented Date:** 03/28/2011 |
| **Test Type:** Black Box | **Test Suite #:1.1** |
| **Product Name:** Elevator System | **Release and Version No:1.1** |
| **Test case Description:**  Check the valid input for all the even floors | |
| **Operation Procedure:**Choose the Even type of car | |
| **Pre-Conditions :**  Car type even selected | **Post Condition:**  The car goes to the desired even numbered floor |
| **Specifications:** | |
| **Input:** Even numbered floor pressed | **Expected Output:** The car goes to the even numbered floor pressed in the user panel |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| **Tested Case ID:** ST-EP-29 | **Test Item:** User Panel |
| **Wrote by:** Sweta Shah | **Documented Date:** 03/28/2011 |
| **Test Type:** Black Box | **Test Suite #:1.1** |
| **Product Name:** Elevator System | **Release and Version No:1.1** |
| **Test case Description:**  Check the invalid input for all the even floors | |
| **Operation Procedure:**Choose the Even type of car | |
| **Pre-Conditions :**  Car type even selected | **Post Condition:**  The car does not go to the desired even numbered floor |
| **Specifications:** | |
| **Input:** Even numbered floor pressed | **Expected Output:** The car does not go to the even numbered floor pressed in the user panel |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| **Tested Case ID:** ST-EP-30 | **Test Item:** User Panel |
| **Wrote by:** Sweta Shah | **Documented Date:** 03/28/2011 |
| **Test Type:** Black Box | **Test Suite #:1.1** |
| **Product Name:** Elevator System | **Release and Version No:1.1** |
| **Test case Description:**  Check the valid input for all odd numbered floors | |
| **Operation Procedure:**Choose the Odd type of car | |
| **Pre-Conditions :**  Car type odd selected | **Post Condition:**  The car goes to the desired odd numbered floor |
| **Specifications:** | |
| **Input:** Odd numbered floor pressed | **Expected Output:** The car goes to the desired odd numbered floor pressed in the user panel |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

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| **Tested Case ID:** ST-EP-31 | **Test Item:** User Panel |
| **Wrote by:** Swetah Shah | **Documented Date:** 03/28/2011 |
| **Test Type:** Black Box | **Test Suite #:1.1** |
| **Product Name:** Elevator System | **Release and Version No:1.1** |
| **Test case Description:**  Check the invalid input for all odd numbered floors | |
| **Operation Procedure:** Choose the Odd type of car | |
| **Pre-Conditions :**  Car type odd selected | **Post Condition:**  The car does not go to the desired odd numbered floor |
| **Specifications:** | |
| **Input:** Odd numbered floor pressed | **Expected Output:** The car does not go to the desired odd numbered floor pressed in the user panel |
| **Required Test Script:**  Test Specification Document, User Interface Specification | |

#### Deleted Test Cases for System Function Test – Decision Table

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| --- | --- |
| **Test Case ID:** ST-DT-01 | **Test Item:** Admin Console |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Check whether the system remains Idle while keeping the no. of cars default and not pressing the “Show Elevator” button. | |
| **Operation procedure:**   1. Do not change no. of cars keep default i.e 1. 2. Do not press the show elevator button. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  Not to click the “Show elevator Button” | **Post-conditions:**  System should remain idle and wait for user input |
| **Inputs data and/or events:**  Not to click the “Show elevator Button” | **Expected output data and/or events:**  System remains idle |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-02 | **Test Item:**Admin Console |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Check whether the system displays the window showing 1 car after keeping the no. of cars default and pressing the “Show Elevator” button. | |
| **Operation procedure:**   1. Do not change no. of cars keep default i.e 1. 2. press the show elevator button. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path | **Post-conditions:**  A new window opens showing 1 car with sequential floor numbers. |
| **Inputs data and/or events:**  click the “Show Elevator” Button. | **Expected output data and/or events:**  A new window opens showing 1 car with sequential floor numbers. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-03 | **Test Item:** Admin Console |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Check whether the system displays the no. of cars of default type(current) after changing the no. of cars (more than one)and pressing the “Show Elevator ” button while not pressing the “Ok” button in the selection window. | |
| **Operation procedure:**   1. Change no. of cars (more than 1). 2. Select the car type. 3. Do not press the “OK” button in selection window. 4. Press the show elevator button. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Number Of Cars**:3  **Select the car type.**  **click** “OK” **Button in Selection window**  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path | **Post-conditions:**  System should display the window showing 3 cars of the default type (current). |
| **Inputs data and/or events:**  click the “Show Elevator Button” | **Expected output data and/or events:**  System should display the window showing 3 cars of the default type (current) |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-04 | **Test Item:** Admin Console |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Check whether the system displays the no. of cars of specified type (even,odd,current) after changing the no. of cars (more than one)and pressing the “Show Elevator ” button while pressing the “Ok” button in the selection window. | |
| **Operation procedure:**   1. Change no. of cars (more than 1). 2. Select the car type. 3. press the “OK” button in selection window. 4. Press the show elevator button. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Number Of Cars**:3  **Select the car type.**  **Click** “OK” **Button in Selection window**  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path | **Post-conditions:**  System should display the window showing 3 cars of the specified type. |
| **Inputs data and/or events:**  click the “Show Elevator Button” | **Expected output data and/or events:**  System should display the window showing 3 cars of the specified type. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-05 | **Test Item:** Admin Console |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Check whether the system displays 2 cars of specified type (Even, Odd) after changing the no. of cars (2)and pressing the “Show Elevator ” button while pressing the “Ok” button in the selection window. | |
| **Operation procedure:**   1. Change no. of cars (more than 1). 2. Select the car type “Even” and “Odd”. 3. press the “OK” button in selection window. 4. Press the show elevator button. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Number Of Cars**:2  **Select the car type.**  **Click** “OK” **Button in Selection window**  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path | **Post-conditions:**  System should display the window showing 2 cars of the even and odd type. |
| **Inputs data and/or events:**  click the “Show Elevator Button” | **Expected output data and/or events:**  System should display the window showing 2 cars of the even and odd type. |

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| **Test Case ID:** ST-DT-06 | **Test Item:** Admin Console |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Check whether the system displays 2 cars of specified type (Even, Current) after changing the no. of cars (2) and pressing the “Show Elevator ” button while pressing the “Ok” button in the selection window. | |
| **Operation procedure:**   1. Change no. of cars (more than 1). 2. Select the car type “Even” and “Current”. 3. press the “OK” button in selection window. 4. Press the show elevator button. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Number Of Cars**:2  **Select the car type.**  **Click** “OK” **Button in Selection window**  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path | **Post-conditions:**  System should display the window showing 2 cars of the Even and Current type. |
| **Inputs data and/or events:**  click the “Show Elevator Button” | **Expected output data and/or events:**  System should display the window showing 2 cars of the Even and Current type. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-07 | **Test Item:** Admin Console |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Check whether the system displays 2 cars of specified type (Odd, Current) after changing the no. of cars (2 )and pressing the “Show Elevator ” button while pressing the “Ok” button in the selection window. | |
| **Operation procedure:**   1. Change no. of cars (more than 1). 2. Select the car type “Odd” and “Current”. 3. Press the “OK” button in selection window. 4. Press the “Show Elevator” button. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Number Of Cars**:2  **Select the car type** “Odd” and “Current”**.**  **Click** “OK” **Button in Selection window**  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path | **Post-conditions:**  System should display the window showing 2 cars of the Odd and Current type. |
| **Inputs data and/or events:**  click the “Show Elevator Button” | **Expected output data and/or events:**  System should display the window showing 2 cars of the Odd and Current type. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-08 | **Test Item:** Admin Console |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Check whether the system remains idle without any input. | |
| **Operation procedure:** | |
| **Pre-conditions:**  **Number of Floors:** 5  **Number Of Cars**:2  **Select the car type** “Odd” and “Current”**.**  **Click** “OK” Button in Selection window  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System should remain idle and wait for user input. |
| **Inputs data and/or events:**  No activity performed on available GUI. | **Expected output data and/or events:**  System will remain idle with specified values Car Status (idle), Door Status (Closed) and Floor Number (1), Car Type(odd and current). |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-09 | **Test Item:** User Panel, Floor Panel,  Door Panel. |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Check the usage output for Floor Panel, Door Panel and User Panel | |
| **Operation procedure:**   1. Click on some button in User Panel. 2. Click on some button on Floor Panel. 3. Click on some button on Door Panel. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Number Of Cars**:2  **Select the car type** “Odd” and “Current”**.**  **Click** “OK” **Button in Selection window**  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System must show changing values for Button Colors, Car Status, Door Status and Floor Number. |
| **Inputs data and/or events:**  Buttons pressed on Floor Panel, Door Panel and User Panel one after another | **Expected output data and/or events:**  System will change its Button Colors, Car Status, Door Status and Floor Number depending on the algorithm. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-10 | **Test Item:** Floor Panel and User Panel |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Check the usage output for Floor Panel and User Panel. | |
| **Operation procedure:**   1. Click on some button in User Panel. 2. Click on some button on Floor Panel. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Number Of Cars**:2  **Select the car type** “Odd” and “Current”**.**  **Click** “OK” **Button in Selection window**  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System must show changing values for Button Colors, Car Status, Door Status and Floor Number. |
| **Inputs data and/or events:**  Buttons pressed on Floor Panel and User Panel one after another. | **Expected output data and/or events:**  System will change its Button Colors, Car Status, Door Status and Floor Number depending on the algorithm. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-11 | **Test Item:** User Panel and Door Panel |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Check the usage output for Door Panel and User Panel. | |
| **Operation procedure:**   1. Click on some button in User Panel. 2. Click on some button on Door Panel. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Number Of Cars**:2  **Select the car type** “Odd” and “Current”**.**  Click “**OK**” Button in Selection window  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System must show changing values for Button Colors, Car Status, Door Status and Floor Number. |
| **Inputs data and/or events:**  Buttons pressed on User Panel and Door Panel one after another. | **Expected output data and/or events:**  System will change its Button Colors , Car Status, Door Status and Floor Number depending on the algorithm. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-12 | **Test Item:**Door Panel and Floor Panel |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Check the usage output for Door Panel and Floor Panel. | |
| **Operation procedure:**   1. Click on some button in Floor Panel. 2. Click on some button on Door Panel. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Number Of Cars**:2  **Select the car type** “Odd” and “Current”**.**  **Click** “OK” **Button in Selection window**  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System must show changing values for Button Colors, Car Status, Door Status and Floor Number. |
| **Inputs data and/or events:**  Buttons pressed on Floor Panel and Door Panel one after another. | **Expected output data and/or events:**  System will change its Button Colors , Car Status, Door Status and Floor Number depending on the algorithm. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-13 | **Test Item:** User Panel |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Check the usage output for User Panel inputs when all current, higher and lower floor number buttons are pressed | |
| **Operation procedure:**   1. Choose the no. of cars . 2. Choose the type. 3. On each in user panel press 3 different floor numbers. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click** the “Show Elevator” Button. | **Post-conditions:**  System reaches to the desired floor. |
| **Inputs data and/or events:**  Current, higher and lower floor buttons are pressed User Panel one after another. | **Expected output data and/or events:**  System will change its Button Colors, Car Status, Door Status and Floor Number depending on the algorithm. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-14 | **Test Item:** User Panel |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Check the usage output for User Panel inputs when only current floor number button is pressed. | |
| **Operation procedure:**   1. Choose the no. of cars . 2. Choose the type. 3. On each car in user panel press the current floor no. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System will remain on the current floor. And the Door opens and then closed. |
| **Inputs data and/or events:**  Current floor button is pressed on User Panel. | **Expected output data and/or events:**  System will change its Button Colors, Car Status, Door Status and Floor Number depending on the algorithm. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-15 | **Test Item:** User Panel |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Check the usage output for User Panel inputs when only higher floor number button is pressed. | |
| **Operation procedure:**   1. Choose the no. of cars . 2. Choose the type. 3. On each in user panel press the no. higher than current floor no. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System reaches to the desired higher floor. |
| **Inputs data and/or events:**  Only higher floor button is pressed of User Panel. | **Expected output data and/or events:**  System will change its Button Colors, Car Status, Door Status and Floor Number depending on the algorithm. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-27 | **Test Item:** Door Panel |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Check the usage output for Door Panel inputs when OPEN button is pressed. | |
| **Operation procedure:**   1. Choose the no. of cars . 2. Choose the type. 3. Press “OPEN” button on Door panel. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  The Door status should change to ‘Open’. |
| **Inputs data and/or events:**  OPEN buttons is pressed on Door Panel when Door Status is Closed. | **Expected output data and/or events:**  System will change its Door Status to “OPEN”. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-28 | **Test Item:** Door Panel |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description:** Check the usage output for Door Panel inputs when CLOSE button is pressed. | |
| **Operation procedure:**   1. Choose the no. of cars . 2. Choose the type. 3. Press “CLOSE” button on Door panel. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  System should remain idle with no change in Door Status.. |
| **Inputs data and/or events:**  CLOSE button is pressed on Door Panel when Door Status is Closed. | **Expected output data and/or events:**  System will remain idle. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-29 | **Test Item:** Door Panel |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description** Check the usage output for Door Panel inputs when CLOSE button is pressed when the door is opened. | |
| **Operation procedure:**   1. Choose the no. of cars . 2. Choose the type. 3. Press “CLOSE” button on Door panel. | |
| **Pre-conditions:**  **Number of Floors:** 5  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  Door status will be Closed. |
| **Inputs data and/or events:**  CLOSE button is pressed on Door Panel when Door Status is Opened. | **Expected output data and/or events:**  System will change its Door Status to close. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-30 | **Test Item:** Floor Panel |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description** Check the usage output for Floor Panel on pressing the UP/Down Button from the even floor no. which is higher or lower than the current floor no of car. | |
| **Operation procedure:**   1. Choose the no. of cars is 3. 2. Choose the type Even, Odd, Current. 3. Press “CLOSE” button on Door panel. | |
| **Pre-conditions:**  **Number of Floors:** 7  **Number of Cars:**3  **Car Type:** Even, odd, current  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  Some car will be reach on the requested floor. |
| **Inputs data and/or events:**  Press UP/Down button is pressed from the even floor which is  i) Higher than the car floor  ii) Lower than the car floor | **Expected output data and/or events:**  If it is the higher floor even or current car (depending on the shortest path) will go up.  If it is the lower floor even or current car (depending on the shortest path) will go down. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-32 | **Test Item:** Floor Panel |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description** Check the usage output for Floor Panel on pressing the UP/Down Button from the same floor no upon which the car is already. | |
| **Operation procedure:**   1. Choose the no. of cars is 3. 2. Choose the type Even, Odd, Current. 3. Press UP/Down button from Floor panel. | |
| **Pre-conditions:**  **Number of Floors:** 7  **Number of Cars:**3  **Car Type:** Even, odd, current  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  Car doors will be open. |
| **Inputs data and/or events:**  Press UP/Down button is pressed from the same floor where the car is already stopped. | **Expected output data and/or events:**  Car Door will be open. |
| **Required test scripts: -** None |  |

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| **Test Case ID:** ST-DT-31 | **Test Item:** Floor Panel |
| **Wrote By:** Shikha Taraiya | **Documented Date:** 04/01/2011 |
| **Test Type:** Black Box Testing | **Test Suite#:** 1.1 |
| **Product Name:** Elevator System | **Release and Version No.:** 1.1 |
| **Test case description** Check the usage output for Floor Panel on pressing the UP/Down Button from the odd floor no. which is higher or lower than the current floor no of car. | |
| **Operation procedure:**   1. Choose the no. of cars is 3. 2. Choose the type Even, Odd, Current. 3. Press UP/Down button from Floor panel. | |
| **Pre-conditions:**  **Number of Floors:** 7  **Number of Cars:**3  **Car Type:** Even, odd, current  **Door Configuration:** Double Door  **User Panel Color:** Green  **User Panel Pressed Button Color:** Blue  **Floor Panel Color:** Yellow  **Floor Panel Pressed Button Color:** Red  **Floor Panel Display:** Text  **Door Panel Display:** Text  **Algorithm Type:** Shortest Path  **click the “Show Elevator” Button** | **Post-conditions:**  Some car will be reach on the requested floor. |
| **Inputs data and/or events:**  Press UP/Down button is pressed from the odd floor which is i) Higher than the car floor  ii) Lower than the car floor | **Expected output data and/or events:**  If it is the higher floor even or current car (depending on the shortest path) will go up.  If it is the lower floor even or current car (depending on the shortest path) will go down. |
| **Required test scripts: -** None |  |