# Tutorial – Week 11

1. Identify the equivalence partitions for the following. Suggest the input data for testing the following unit.
    a. The ticketing department of a subway company decided that children get the free ride, age between 12 and 21 as well as age 60 and over pay half price, the rest pay full price. Children is defined as age less than 11.

    **Answers:**

    Free Ride : 0 to 11

    Test data: 1, 11, 4

    Half price: 12 to 21 ; and >= 60

    Test data: 12, 21, 15, 60, 130

    Full price: 22- 59

    Test data: 22, 59, 35

2. The following Java method accept an ArrayList<Integer> as parameter and return the sum of all the integer in the list. Suggest the test data you want to use to test the method.

    ```
    public int addAll(ArrayList<Integer> items)
    ```

    **Answers:**

    addAll(null)
    addAll( new ArrayList<Integer>() );

3. Suggest a template a developer can use to develop test case.

    **Answers:**

## Test Case Template

| | | | |
|---|---|---|---|
| Project Name | | | |
| Test Case ID | | Designer | |
| Module Name | | Tester | |
| Test Title | | | |
| Description | | | |
| Precondition | | | |
| Dependencies | | | |

| Step | Action | Test Data | Expected Result | Actual Result | Status | Notes |
|---|---|---|---|---|---|---|
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| | |
|---|---|
| Postcondition | |

| | A | B | C | D | E | F | G | H | I | J | K |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | **Test Case ID** | | BU_001 | **Test Case Description** | | Test the Login Functionality in Banking | | | | | |
| 2 | **Created By** | | Mark | **Reviewed By** | | Bill | | **Version** | | 2.1 | |
| 3 | | | | | | | | | | | |
| 4 | **QA Tester's Log** | | Review comments from Bill incorporated in version 2.1 | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | **Tester's Name** | | Mark | **Date Tested** | | 1-Jan-2025 | | **Test Case (Pass/Fail/Not** | | Pass | |
| 7 | | | | | | | | | | | |

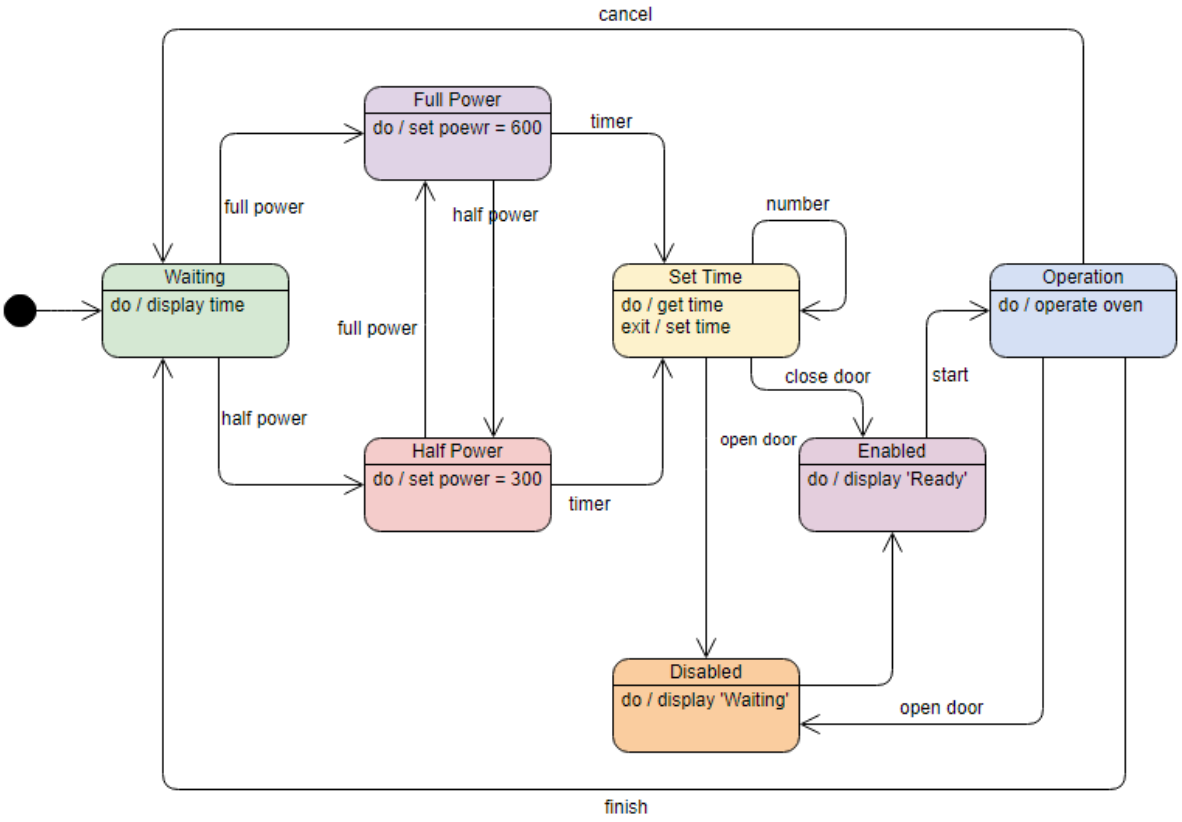
| | S # | Prerequisites: |
|---|---|---|
| 8 | | |
| 9 | 1 | Access to Chrome Browser |
| 10 | 2 | |
| 11 | 3 | |
| 12 | 4 | |

| | S # | Test Data |
|---|---|---|
| 8 | | |
| 9 | 1 | Userid = mg12345 |
| 10 | 2 | Pass = df12@434c |
| 11 | 3 | |
| 12 | 4 | |

| | | |
|---|---|---|
| 13 | | |
| 14 | **Test Scenario** | Verify on entering valid userid and password, the customer can login |
| 15 | | |

| | Step # | Step Details | Expected Results | Actual Results | Pass / Fail / Not executed / Suspended |
|---|---|---|---|---|---|
| 16 | | | | | |
| 17 | | | | | |
| 18 | 1 | Navigate to http://demo.guru99.com | Site should open | As Expected | Pass |
| 19 | 2 | Enter Userid & Password | Credential can be entered | As Expected | Pass |
| 20 | 3 | Click Submit | Cutomer is logged in | As Expected | Pass |
| 21 | 4 | | | | |
| 22 | | | | | |

4. Create a test case to test the Oven class base on the below state machine diagram.




Answers

1 state table

| Initial State | Input | Next State | Scenarios |
|---|---|---|---|
| Start | power on | Waiting | 1, 2, 3 |
| Waiting | full power | Full Power | 1, 2 |
| Waiting | half power | Half Power | 3 |
| Full Power | timer | Set Timer | 1, 2 |
| Full Power | half power | Half Power | |
| Half Power | full power | Full Power | |
| Half Power | timer | Set Timer | 3 |
| Set Timer | number | Set Timer | 1, 2 |
| Set Timer | close door | Enabled | 1, 2 |
| Set Timer | open door | Disabled | 3 |
| Enabled | start | Operation | 1, 2 |
| Disabled | close door | Enabled | 3 |
| Operation | cancel | Waiting | 1, 3 |
| Operation | open door | Diabled | 2 |
| Operation | finish | Waiting | 2 |

2. scenarios

| Initial State | Input | Next State | Scenarios |
|---|---|---|---|
| Start | power on | Waiting | 1, 2, 3 |
| Waiting | full power | Full Power | 1, 2 |
| Waiting | half power | Half Power | 3 |
| Full Power | timer | Set Timer | 1, 2 |
| Full Power | half power | Half Power | |
| Half Power | full power | Full Power | |
| Half Power | timer | Set Timer | 3 |
| Set Timer | number | Set Timer | 1, 2 |
| Set Timer | close door | Enabled | 1, 2 |
| Set Timer | open door | Disabled | 3 |
| Enabled | start | Operation | 1, 2 |
| Disabled | close door | Enabled | 3 |
| Operation | cancel | Waiting | 1, 3 |
| Operation | open door | Diabled | 2 |
| Operation | finish | Waiting | 2 |

| | |
|---|---|
| Scenario 1 | Start > Waiting > Full Power > Set Timer > Set Timer > Enabled > Operation > Waiting |
| Scenario 2 | Start > Waiting > Full Power > Set Timer > Set Timer > Enabled > Operation > Diabled > Enabled > Operation > Waiting |
| Scenario 3 | Start > Waiting > Half Power > Set Timer > Disabled > Enabled > Operation > Waiting |

3. test cases using template

**Test Case Template**

| | | | |
|---|---|---|---|
| **Project Name** | Old Fashion Oven | | |
| **Test Case ID** | | **Designer** | |
| **Module Name** | Panel operation | **Tester** | |
| **Test Title** | Overall run | | |
| **Description** | Testing the overall run of the oven using the front panel | | |

| | |
|---|---|
| **Precondition** | Power socket is plugged |
| **Dependencies** | |

| Step | Action | Test Data | Expected Result | Actual Result | Status | Notes |
|---|---|---|---|---|---|---|
| 1 | power on | | display time | | | |
| 2 | full power | | power = 600 | | | |
| 3 | timer | | time set | | | |
| 4 | input number | | new time set | | | |
| 5 | close door | | Ready | | | |
| 6 | start | | oven in operation | | | |
| 7 | cancel | | display time | | | |

**Postcondition**

The oven go back to waiting state without completing the countdown of the time set