

**Develop an end-to-end test plan to cover all integration points and layers**

**Section A: Test plan**

Test strategy:

Manual testing:

* + Functional Testing
  + Integration Tests
  + Test case creation and execution (Jira/Microsoft test manager/any free source)
  + Test cycles -execution report

Automation testing:

* + Payments -Web service automation
  + Api’s testing and mapping validation of 2 layers

Security testing:

* + Payments -Web service requests

Performance testing

* + Load and Scalability tests for each layer Api’s and combine test for overall functionality.

Features in scope

* + Successful payments message-scenarios
* Given customer age is more than 18 years and location is NSW

And Correct customer id, transID, tran amount, merchant id request passed

And ZIP and DOB has proper details in DB

Then transaction should be succeeded

* Given customer age is less than 18 years and location is NSW

And Correct customer id, transID, tran amount, merchant id request passed

And amount is 1000$

Then transaction should be succeeded

* + Payments based one age
* Given customer is showing as adult

And DOB is not available in DB

Then transaction should be rejected

* + Payments based on the zip
* Given customer Zip is unknown

And withdraw amount is 2000$

Then transaction should be rejected

* + Declined payments -with several conditions fails
* Customer not found in the DB
* Merchant is not found in DB
* Customer is inactive /merchant is inactive
  + Different failure message scenarios -customer should be notified
* Connection time outs -if any amount deducted and payment is failed ,should be refunded
* Network issue while transactions
* Authorization issues
  + During the payment process check what happens if the session ends
* Check what happens if payment gateway stops responding during payment
* During the payment process check error pages and security pages.
  + Check all format and messages when successful payment process
* Verifying the amount format with proper currency format that disclosed earlier during transaction.
  + Verify the integration layer -decision engine request data
* Given customer ,merchant details will be sent from integration layer
* Then All the request details mapping should be proper in correct format which will accept by decision engine

Timelines

* + The project end date for completing the dev and testing (should be defined)
  + A release testing dates (should be defined)
  + sprint activities-test cycles for each Sprint and mapping the scenarios
  + All test cases should be logged in any tool and mark the execution

Risks

* + NA

**Detail test data management plan**

**Section B: Test Data for integration layer**

{

Customerid:1234

TranID:1232

tranAmount:1000

merchantID:8888

}

DB -query to fetch the customerDOB customerpostalcode, -from customer details table

merchantPostalCode -from merchant details table

enriched Test data which will be accepted by decision engine

{

Customerid:1234,

TranID:1232,

tranAmount:1000,

merchantID:8888,

customerDOB,

CustomerPostalcode,

merchantpostalcode

}

**Detail test toolset plan**

**Section C: Tools suggested for the project**

1. Burp tool/fiddler- Pen testing
2. Postman- Web service automation
3. JMeter -Performance Testing
4. AWS- Mock Creation dummy stubs
5. SeeTestAutomation- For mobile automation
6. Jenkins- For running the Auto deploy jobs

**For each integration point, take one use case as an example to walkthrough end-to-end about testing strategy, steps, test data and report.**

**Section D:**

Feature : Card payment transactions

Scenario: Verify the successful card payment- transaction

Preconditions:

1. Given Customer is active in DB
2. And Merchant is active in DB
3. And Customer is location is NSW
4. And merchant network is not interruption

Scenario:

Given Customer is passing the card details in online merchant /offline merchant

And payment request has sent to integration layer with proper |Customerid|TranID|tranAmount|merchantID|

| 123 | 1234 | 1000 | 4567 |

And DB details are fetched customerDOB, customerpostalcode, merchantpostal code

And the enriched json data with all customer, merchant details should mapped correctly in format accepted by decision engine

When user send the request to with all the details into the decision engine

Then transaction should be succeeded

And merchant should be notified and receive the payment

And customer also should be notified with successful transaction