Movie API Test Plan:

Movie API project is collecting movie information from a variety of sources and exposing REST API to enable anyone to be able fetch these details. In addition, users can also submit movie information. It is using ML algorithms to process the submission and add to the movie database.

**Functional test:**

1. Test the Get API to make sure all require functionalities are implemented and return the expected results.
2. Test the Post API to make sure all require functionalities are implemented and return the expected results.
3. Test Business requirements to make sure all require functionalities are implemented and return the expected results.

**Regression test:**

* Not required

**Performance test:**

* Not required

Test Use Cases:

**GET**

1. Get with p = 'batman', validate API status return 200
2. Get with p = = 'batman', validate API returns the correct records
3. Get without p parameter, validate API status return 404
4. Get with count =0, validate all results return
5. Get with count = 2, validate only 2 results return
6. Get with count greater than all existing movies, validate all results return
7. Get without Header, validate API status return 404
8. Get with not existing parameter, validate API status return 404

**Note:**

* Assume parameter p in Get API will be the substring of Get API response title field
* Currently Get API only support q='batman'. No matter q=test or q= , API all return the same as q='batman'

**POST**

1. Post with required payload, validate API status return 200
2. Post with required payload, validate posted record is returned by Get API
3. Post name field is empty in payload, validate API status return 404
4. Post description field is empty in payload, validate API status return 404
5. Post without name in payload, validate API status return 404
6. Post without description in payload, validate API status return 404
7. post without Header, validate API status return 404
8. post with not existing payload, validate API status return 404

**Note:**

* Assume name in Post API payload will be the value in title field
* Assume when post movie, the Post API process checks the duplication of the movie name in title field. No duplicate movie name (title) is allowed
* Currently Post API only return status success, but data is not posted, Get API is not returned the record.

**Business requirements:**

1. SPL-001: in GET all response, validate no two movies have the same image
2. SPL-002: in GET all response, validate poster\_path link if not null, is valid
3. SPL-003: in GET all response, validate movies with genre\_id null, return first
4. SPL-003: in GET all response, validate if multiple movies with genre\_id null, sort by id ascending
5. SPL-003: in GET all response, validate if genre\_id is not null, sort by id ascending
6. SPL-004: in GET all response, validate the number of movies whose sum of "genre\_ids" > 400 should be no more than 7
7. SPL-005: in GET all response, validate there is at least one movie in the database whose title has a palindrome in it
8. SPL-006: in GET all response, validate there are at least two movies whose title contain the title of another movie

**Note**

* Assume all poster\_path links must be valid means the website exists