Introduction

Purpose:

* + Check the validity of a Case using the URL Endpoint: <https://lucent-trifle-ba3d62.netlify.app/.netlify/functions/checkcase>
  + A valid Case should receive code 200, with body { message: "Case valid"}
  + Validate the properties for a Case

Testing Scope

* + Verify the endpoint should accept an HTTP POST request containing JSON using postman tool.
  + Validate mandatory properties for a case - case\_id, patient\_id, patient\_name, dob and tissue\_type
  + Validate the response code of the endpoint is 200 for valid case.
  + Validate the response code of the endpoint is 422 for invalid case
  + Validate header -content-type does not accept anything other than JSON

Test Environment

* + Staging(assuming test environment as staging)
  + Tool - Postman

Test Cases

### Positive/negative scenarios

1. Ensure that endpoint accepts a HTTP POST request containing JSON describing a Case
2. Ensure that the endpoint does not accept unsupported methods -GET/DELETE -(the response should return status 400)FAILED-System returns 200
3. Should not accept the endpoint without HTTPS - FAILED
4. Ensure that response body displays valid message ‘Case valid’ and response code is ‘200’
5. Verify request only accepts content type “JSON” FAILED - Header content-type is displayed as text/plain; charset=utf-8
6. Validate invalid content type-TEXT - FAILED - Response code is 200 instead of 415
7. Check Mandatory Case Properties (request should return as a valid response only if all mandatory properties are provided)
8. Invalid Case- Without Mandatory Properties (request should return as in-valid response only if all mandatory properties are not provided)
9. Invalid Case - Missing UUID (the response should return status 422)
10. Invalid Case - Incorrect UUID-more than 32 chars (the response should return status 422)
11. Invalid Case - Incorrect UUID-less than 32 chars(the response should return status 422)
12. Invalid Case - Incorrect UUID-invalid format-Special char(the response should return status 422)
13. Invalid Case - Incorrect UUID-Not unique id(the response should return status 422) - FAILED -System returns 400 bad request
14. Invalid Case - Incorrect UUID-Empty StringNot unique id(the response should return status 422)
15. Invalid Case - Incorrect UUID-Invalid Format-xxxx-xxxx-xxxx-xxxx-xxxx-xxxx (the response should return status 422)
16. Valid Case - Valid Patient\_id -String with 5 components, delimited by the ^ symbol(the response should return status 200)
17. Invalid Case - Invalid Patient\_id -String with 5 components NOT delimited by the ^ symbol (the response should return status 422)
18. Valid Case - Valid Patient\_id -ID Number-Contains only 1 digit(the response should return status 200)
19. Invalid Case - Incorrect Patient\_id -Blank/Empty String(the response should return status 422)
20. Invalid Case - Incorrect Patient\_id -ID Number-Contains alphabets(the response should return status 422)
21. Invalid Case - Incorrect Patient\_id -ID Number-Contains special chars(the response should return status 422)
22. Invalid Case - Incorrect Patient\_id -ID Number-Contains more than 15 digits(the response should return status 422)
23. Invalid Case - Incorrect Patient\_id -ID Number-Contains negative numbers(the response should return status 422)
24. Invalid Case - Incorrect Patient\_id -Flag-empty(the response should return status 422)
25. Invalid Case - Incorrect Patient\_id -Flag-contains strings(the response should return status 422)
26. Invalid Case - Incorrect Patient\_id -Flag-incorrect format(the response should return status 422)
27. Invalid Case - Incorrect Patient\_id -Flag-decimal(the response should return status 422)
28. Invalid Case - Incorrect Patient\_id -Flag-special chars(the response should return status 422)
29. Valid Case - Patient\_id -Flag-Accepts 1 (the response should return status 200)
30. Valid Case - Patient\_id -Flag-Accepts 0 (the response should return status 200)
31. Valid Case-Assigning Authority - Accepts - BCV(the response should return status 200)
32. Valid Case-Assigning Authority - Accepts - ISO(the response should return status 200)
33. Valid Case-Assigning Authority - Accepts - M10(the response should return status 200)
34. Valid Case-Assigning Authority - Accepts - M11(the response should return status 200)
35. Valid Case-Assigning Authority - Accepts - NPI(the response should return status 200)
36. Invalid Case-Assigning Authority - case sensitive -npi(the response should return status 422)
37. Invalid Case-Assigning Authority - less than 3 character code(the response should return status 422)
38. Invalid Case-Assigning Authority - contains number/invalid set(the response should return status 422)
39. Invalid Case-Assigning Authority - contains empty(the response should return status 422)
40. Invalid Case-Assigning Authority - more than 3 character code(the response should return status 422)
41. Valid Case-Identifier Type Code - valid digit -5 character string; 2 letters and 3 digits (the response should return status 200)
42. Invalid Case-Identifier Type Code - invalid digit -5 character string; 3 letters and 2 digits (the response should return status 422)
43. Invalid Case-Identifier Type Code - invalid digit -empty(the response should return status 422)
44. Invalid Case-Identifier Type Code - invalid digit -incorrect format(the response should return status 422)
45. Invalid Case-Identifier Type Code - invalid digit -less than 5 chars (the response should return status 422)
46. Valid Case-Assigning Facility - Only accepts MC(the response should return status 200)
47. Invalid Case-Assigning Facility - Not MC(the response should return status 422)
48. Invalid Case-Assigning Facility - invalid value-empty (the response should return status 422)
49. Invalid Case-Assigning Facility - invalid value-numbers(the response should return status 422)
50. Invalid Case-Assigning Facility - invalid value-case sensitive 'mc'(the response should return status 422)
51. Invalid Case-Assigning Facility - invalid value-special chars- MC%(the response should return status 422) FAILED-System returns 200
52. Valid Case-Patient Name - accepts string with 2 components (the response should return status 200)
53. Valid Case-Patient Name - accepts string with 3 components(the response should return status 200) - FAILED-System returns 422
54. Invalid Case-Patient Name - invalid value - 4 components (the response should return status 422)
55. Invalid Case-Patient Name - invalid value - 1 components(the response should return status 422)
56. Invalid Case-Patient Name - invalid value - empty string(the response should return status 422)
57. Valid Case-Patient Name - 2 components- case sensitive string(the response should return status 200)
58. Invalid Case-Patient Name - invalid value - numbers(the response should return status 422)
59. Invalid Case-Patient Name - invalid value - special chars(the response should return status 422)
60. Valid Case-DOB - Correct format-YYYYMMDD(the response should return status 200)
61. Invalid Case-DOB - incorrect format-YYYY-MM-DD(the response should return status 422)FAILED-System returns 200
62. Invalid Case-DOB - incorrect format-DDMMYYY(the response should return status 200)
63. Invalid Case-DOB - incorrect format-future year(the response should return status 422)FAILED-System returns 200
64. Invalid Case-DOB - incorrect format-invalid year-1899(the response should return status 422)FAILED-System returns 200
65. Invalid Case-DOB - incorrect value-empty(the response should return status 422)
66. Invalid Case-DOB - incorrect format-MMDDYYY(the response should return status 422)
67. Valid Case - tissue\_type - accepts - prostate(the response should return status 200)
68. Valid Case - tissue\_type - accepts - breast(the response should return status 200)
69. Valid Case - tissue\_type - accepts - colorectal(the response should return status 200)
70. Valid Case - tissue\_type - accepts - skinthe response should return status 200)
71. Invalid Case - tissue\_type - should not accept any other tissue\_type(the response should return status 422)
72. Invalid Case - tissue\_type - case sensitive -BREAST(the response should return status 422)
73. Invalid Case - tissue\_type - Two tissue types -skin,breast(the response should return status 422)
74. Invalid Case - tissue\_type - Two tissue types -empty(the response should return status 422)

Test Execution

* + Test execution can be done via the postman tool by importing PathologyTest.postman\_collection.json file and running via collection runner
  + Alternatively, tests can be run via the command line via Newman Tool
  + **Newman Installation can be done by executing the below command:**

npm install -g newman (assuming node is already installed)

**Command to run via CLI**: newman run PathologyTest.postman\_collection.json

Conclusion

* Total 72 scripts executed with 142 assertions.
* 10 test cases failed (17 assertions)
* Total duration for running test:22.1sec
* Average response time : 279ms

