

BackBox Analysis

Black-box design techniques (manual analysis)

- Based on requirements, we are building Equivalence partitioning analysis and Boundary Value Analysis with 3 Boundary Values.

Title Test Cases

Field	Valid Range	Type	Notes
TitleType	5-25 chars	string	
PrimaryTitle	5-255 chars	string	
OriginalTitle	5-255 chars	string	
StartYear	1888-2025	integer	Current year = 2025
EndYear	NULL or >= StartYear	integer	Dependency on StartYear
RuntimeMinutes	1-550 or NULL	integer	

Partition Type	Partition	Valid Range	Test Case Values
Equivalence Partitioning	Valid TitleType	5-25 chars & != any special char	5-char, 6-char, 15-char, 24-char, 25-char
Equivalence Partitioning	Invalid TitleType	<5 or >25 chars	movi, 50-char
Boundary Value Analysis	Valid Lower Bound		5-char
	Valid Upper Bound		25-char
	InValid Lower Bound		1-char, 4-char
	Invalid Upper Bound		26-char, str.max
Edges	edges cases		NULL, "", " ", #asbas-char etc.
Equivalence Partitioning	Valid PrimaryTitle	5-255 chars and dash allowed	6-char, 50-char, 254-char, star-wars
Equivalence Partitioning	Invalid PrimaryTitle	<5 or >255 chars	4-char, 400-char

Partition Type	Partition	Valid Range	Test Case Values
Boundary Value Analysis	Valid Lower Bound		5-char
	Valid Upper Bound		255-char
	Invalid Lower Bound		1-char , 4-char
	Invalid Upper Bound		256-char , char.max
Edges	edges cases		NULL, "", " ", #asbas-char etc.
Equivalence Partitioning	Valid OriginalTitle	5-255 chars and dash allowed	Same as PrimaryTitle (identical constraints)
Equivalence Partitioning	Valid StartYear	1888-current year	1888, 1889, 1999, 2024, 2025
Equivalence Partitioning	Invalid StartYear	< 1888 or > current year	1887, 2026, 0000
Boundary Value Analysis	Valid Lower Bound		1888
	Valid Upper Bound		2025
	InValid Lower Bound	0 - 1887	999, 1887
	InValid Upper Bound	2026 - future	2026 - future
Edges	edges cases		0000 ,-2020
Equivalence Partitioning	Valid EndYear	NULL or >=StartYear	2026, 2025, NULL
Equivalence Partitioning	Invalid EndYear	< StartYear or invalid year or endYear > 2075 year in future fx 2025 + 50 (businessLimitYear)	9, 99, 999, 2010(with startYear=2025), 2075 (current year 2025)
Boundary Value Analysis	Valid Lower Bound	EndYear>=StartYear	Start=2025/End=2025

Partition Type	Partition	Valid Range	Test Case Values
	Valid Upper Bound		Start=2025/End=2026
	InValid Lower Bound		Start=2025/End=2024
Edges	edges cases		0000, 9999, 2026
Equivalence Partitioning	Valid RuntimeMinutes	60-1440 or NULL	60, 61, 1000, 1439, NULL
Equivalence Partitioning	Invalid RuntimeMinutes		50
	Valid Lower Bound	60-1440	60
	Valid Upper Bound		1440
	InValid Bound	0-59	0, 59
	InValid Bound	1441 - max	1441, max
Edges	edges cases		-1, int.max

- List of test cases:
 - **TitleType:**
 - Valid:
 - 5 characters (lower valid boundary)
 - 6 characters
 - 7 characters
 - 24 characters
 - 25 characters (upper valid boundary)
 - Invalid
 - 1 character
 - 4 characters
 - 26 characters
 - Edge Cases:
 - NULL
 - ""
 - " "
 - "#5-char"
 - **PrimaryTitle & OriginalTitle:**
 - Valid:
 - 5-character
 - 6-character
 - 50-character

- 254-character
- 255-character
- Invalid:
 - 1-character
 - 4-character
 - 256-character
 - 400-character
 - `char.max` (maximum representable length)
- Edge Cases:
 - `NULL`
 - `""`
 - `" "`
 - `"#5-char"`
- **StartYear:**
 - Valid:
 - 1888
 - 1889
 - 1999
 - 2024
 - 2025
 - Invalid:
 - 999
 - 1887
 - -2020
 - 2026
 - Edge Cases:
 - 0000
- **EndYear:**
 - Valid:
 - 2026 endYear > 2025 startYear
 - `NULL`
 - Invalid:
 - 9
 - 99
 - 999
 - 2010 (with startYear=2025)
 - Edge Cases:
 - 0000
 - 9999
 - 2026 (when startYear=2025)
- **RuntimeMinutes:**
 - Valid:
 - 60
 - 61
 - 1000
 - 1439

- 1440
- NULL
- Invalid:
 - 0
 - 50
 - 59
 - 1441
- Edge Cases:
 - -1
 - int.max

Genres

Partition Type	Partition	Valid Range	Test Case Values
Equivalence Partitioning	Valid Genre	3-50 char & != any special char	3-char, 2.char, 10-char, 49-char, 50-char Sci-Fi
	Invalid Genre	< 3 or >50 chars	1-char, 2-char, 51-char 60-char
Boundary Value Analysis	Valid Lower Bound		3-char
	Valid Upper Bound		50-char
	Invalid Bound	1 - 2	1-char, 2-char
	Invalid Bound	51 - string.max	51-char, string.max
Edges	Genre edges		NULL, "", " ", #5-char

- list of test cases:
- **Genre:**
 - Valid:
 - 3 characters (lower valid boundary)
 - 2 characters
 - 10 characters
 - Sci-Fi
 - 49 characters
 - 50 characters (upper valid boundary)
 - Invalid:
 - 1 character
 - 2 characters
 - 51 characters
 - 60 characters
 - Edge Cases:
 - NULL
 - ...
 - ..

- "#5-char"

Episodes

Partition Type	Partition	Valid Range	Test Case Values
Equivalence Partitioning	Valid <code>EpisodeNumber</code>	1-999 & != 0	1, 2, 500, 998, 999
	Invalid <code>EpisodeNumber</code>	< 1 or > 999	0, -1, -5, 1000, 2000, int.max
Boundary Value Analysis	Valid Lower Bound		1
	Valid Upper Bound		999
	Invalid Lower Bound		0
	Invalid Upper Bound		1000
Edges	Episode edges		NULL
Equivalence Partitioning	Valid <code>SeasonNumber</code>	1 - 99 & != 0	1, 2, 55, 98, 99
	Invalid Season	< 1 or > 99	0, -1, -50, 100, 501, int.max
Boundary Value Analysis	Valid Lower Bound		1
	Valid Upper Bound		99
Edges	Season edges		NULL

- list of test cases:
 - **EpisodeNumber:**
 - Valid:
 - 1
 - 2
 - 500
 - 998
 - 999
 - Invalid:
 - 0
 - -1
 - -5
 - 1000
 - 2000
 - int.max
 - Edge Cases:
 - Null
 - **SeasonNumber:**
 - Valid:
 - 1
 - 2
 - 55
 - 98

- 99
- Invalid:
 - 0
 - -1
 - -5.5
 - 100
 - 5.5
 - 501
- Edge Cases:
 - Null

Aliases

Partition Type	Partition	Valid Range	Test Case Values
Equivalence Partitioning	Valid Region	2-char - 5-char	2-char, 3-char, 4-char ,5-char
	Invalid Region	< 2 or > 5	1-char, 6-char, 150-char
Boundary Value Analysis	Valid Lower Bound		2-char
	Valid Upper Bound		5-char
	Invalid Lower Bound		""(empty string)
Edges	Invalid Upper Bound		6-char
	Region edges		NULL, " ", any special characters, unknown
	Valid Language	2-char - 5-char	2-char, 3-char, "en-us"
Boundary Value Analysis	Invalid Language	< 2 or > 5	1-char, 6-char, 10-char
	Lower Bound		2-char
	Upper Bound		5-char
Edges	edges		NULL, "", " "
Equivalence Partitioning	Valid Title	5-char - 255 & allowed	6-char, 50-char, 254-char, 250-char, star-wars
	Invalid Title	< 5 or > 255	3-char, 4-char, 256-char, 400-char, star#wars

Partition Type	Partition	Valid Range	Test Case Values
Boundary Value Analysis	Lower Bound		5-char
	Upper Bound		255-char
Edges	edges		NULL, "", " ", #asbas-char etc.

- list of test cases:

- **Region:**

- Valid:
 - 2 characters
 - 3 characters
 - 4 characters
 - 5 characters
 - Invalid:
 - 1 character
 - 6 characters
 - 150 characters
 - ""(empty string)
 - Edge Cases:
 - NULL
 - " "
 - any special characters e.g., #5-char
 - unknown

- **Language:**

- Valid:
 - 2-char
 - 3-char
 - "en-us"
 - Invalid:
 - 1-char
 - 6-char
 - 10-char
 - Edge Cases:
 - NULL
 - ""

- **Title:**

- Valid:
 - 6-char
 - 50-char
 - 254-char
 - 255-char
 - star-wars
 - Invalid:
 - 3-char
 - 4-char

- 256-char
- 400-char
- star#wars
- Edge Cases:
 - NULL
 - ""
 - " "
 - #asbas-char

Person

Partition Type	Partition	Valid Range	Test Case Values
Equivalence Partitioning	Valid Name	2 - 100	2-char, 3-char, 50-char ,99-char
	Invalid Name	< 1 or > 100	1-char, 101-char, 102-char, 150-char, str.max
Boundary Value Analysis	Valid Lower Bound		2-char
	Valid Upper Bound		100-char
Edges	Name edges		NULL, " ", ""(empty string) , any special characters
Equivalence Partitioning	Valid BirthYear	1888 - newest year	1995
	Invalid BirthYear	< 1888 or > year.now	1, 19, 199 , 19999
Edges	BirthYear edges		NULL, 0000 , -2024
Equivalence Partitioning	Valid EndYear	4 numeric digit & null allow & > birthyear	2020
	Invalid EndYear		1, 19, 199, 19999, EndYear (2025) > BirthYear (1945)
Edges	EndYear edges		NULL, 0000

- list of test cases:
- **Name:**
 - Valid:
 - 2 characters
 - 3 characters
 - 50 characters

- 99 characters
- Invalid:
 - 1 character
 - 101 characters
 - 102 characters
 - 150 characters
 - string.max (maximum representable length)
- Edge Cases:
 - NULL
 - "" (empty string)
 - " " (space)
 - any special characters e.g., #5-char
- **BirthYear:**
 - Valid:
 - 1995
 - Invalid:
 - 1
 - 19
 - 199
 - 19999
 - Edge Cases:
 - 0000
 - Null
- **EndYear:**
 - Valid:
 - 2020
 - Invalid:
 - 1
 - 19
 - 199
 - 19999
 - EndYear (2025) < BirthYear (1945)
 - Edge Cases:
 - 0000
 - Null