Testing of Fuzzywuzzy

Team: The Darkness
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What is fuzzywuzzy?

- String comparison module
- Uses python standard difflib to calculate differences between strings
- Can tokenize strings to ensure testing integrity

Testing

- Decided on testing simple strings and fringe cases
- Wanted to ensure that empty strings could be handled
- Used a consistent string to ensure testing integrity within each method

Fault Injection

- Our faults involve arithmetic changes when calculating the ratio
- Some constants were altered to demonstrate how the values would change
- Also shows how only certain strings were affected because our string inputs were simple

Testing without faults

Test	Requirement	Component	Method	Input parameters	Actual output	Expected output	Result
id1	Returns ratio of strings similarity as a percentage, using python difflib	fuzz	ratio	This is a test, This is a tess	93	93	PASSED
id10	Returns the ratio of the most similar substrings as a percentage	fuzz	partial_ratio	a,	0	0	PASSED
id11	returns similarity ratio between two strings, api method	fuzz	QRatio	This is a test, This is a tess	93	93	PASSED
id12	returns similarity ratio between two strings, api method	fuzz	QRatio	, a	0	0	PASSED
id13	returns similarity ratio between two strings, api method	fuzz	QRatio	a, b	0	0	PASSED
id14	returns similarity ratio between two strings, api method	fuzz	QRatio	a, aa	67	67	PASSED
id15	returns similarity ratio between two strings, api method	fuzz	QRatio	This is a test,	0	0	PASSED
id16	returns similarity ratio between two strings, api method, preserves unicode values of strings	fuzz	UQRatio	This is a test, This is a tess	93	93	PASSED
id17	returns similarity ratio between two strings, api method, preserves unicode values of strings	fuzz	UQRatio	, a	0	0	PASSED
id18	returns similarity ratio between two strings, api method, preserves unicode values of strings	fuzz	UQRatio	a, b	0	0	PASSED
id19	returns similarity ratio between two strings, api method, preserves unicode values of strings	fuzz	UQRatio	a, aa	67	67	PASSED
id2	Returns ratio of strings similarity as a percentage, using python difflib	fuzz	ratio	, a	0	0	PASSED
id20	returns similarity ratio between two strings, api method, preserves unicode values of strings	fuzz	UQRatio	This is a test,	0	0	PASSED
id21	interprets which algorithm would be better to use and returns string similarities using python difflib	fuzz	WRatio	This is a test, This is a tess	93	93	PASSED
id22	interprets which algorithm would be better to use and returns string similarities using python difflib	fuzz	WRatio	, a	0	0	PASSED
id23	interprets which algorithm would be better to use and returns string similarities using python difflib	fuzz	WRatio	a, b	0	0	PASSED
id24	interprets which algorithm would be better to use and returns string similarities using python difflib	fuzz	WRatio	a, aa	90	90	PASSED
id25	interprets which algorithm would be better to use and returns string similarities using python difflib	fuzz	WRatio	This is a test,	0	0	PASSED
id3	Returns ratio of strings similarity as a percentage, using python difflib	fuzz	ratio	a, b	0	0	PASSED
id4	Returns ratio of strings similarity as a percentage, using python difflib	fuzz	ratio	a, Aa	67	67	PASSED
id5	Returns ratio of strings similarity as a percentage, using python difflib	fuzz	ratio	This is a test,	0	0	PASSED
id6	Returns the ratio of the most similar substrings as a percentage	fuzz	partial_ratio	This is a test, This is a tess	92	92	PASSED
id7	Returns the ratio of the most similar substrings as a percentage	fuzz	partial_ratio	, a	0	0	PASSED
id8	Returns the ratio of the most similar substrings as a percentage	fuzz	partial_ratio	a, b	0	0	PASSED
id9	Returns the ratio of the most similar substrings as a percentage	fuzz	partial_ratio	a, aa	100	100	PASSED

Testing with faults

Test	Requirement	Component	Method	Input parameters	Actual output	Expected output	Result
id1	Returns ratio of strings similarity as a percentage, using python difflib	fuzz	ratio	This is a test, This is a tess	1001	93	FAILED
id10	Returns the ratio of the most similar substrings as a percentage	fuzz	partial_ratio	a,	0	0	PASSED
id11	returns similarity ratio between two strings, api method	fuzz	QRatio	This is a test, This is a tess	1001	93	FAILED
id12	returns similarity ratio between two strings, api method	fuzz	QRatio	, a	100	0	FAILED
id13	returns similarity ratio between two strings, api method	fuzz	QRatio	a, b	1000	0	FAILED
id14	returns similarity ratio between two strings, api method	fuzz	QRatio	a, aa	1001	67	FAILED
id15	returns similarity ratio between two strings, api method	fuzz	QRatio	This is a test,	100	0	FAILED
id16	returns similarity ratio between two strings, api method, preserves unicode values of strings	fuzz	UQRatio	This is a test, This is a tess	1001	93	FAILED
id17	returns similarity ratio between two strings, api method, preserves unicode values of strings	fuzz	UQRatio	, a	100	0	FAILED
id18	returns similarity ratio between two strings, api method, preserves unicode values of strings	fuzz	UQRatio	a, b	1000	0	FAILED
id19	returns similarity ratio between two strings, api method, preserves unicode values of strings	fuzz	UQRatio	a, aa	1001	67	FAILED
id2	Returns ratio of strings similarity as a percentage, using python difflib	fuzz	ratio	, a	0	0	PASSED
id20	returns similarity ratio between two strings, api method, preserves unicode values of strings	fuzz	UQRatio	This is a test,	100	0	FAILED
id21	interprets which algorithm would be better to use and returns string similarities using python difflib	fuzz	WRatio	This is a test, This is a tess	1001	93	FAILED
id22	interprets which algorithm would be better to use and returns string similarities using python difflib	fuzz	WRatio	, a	0	0	PASSED
id23	interprets which algorithm would be better to use and returns string similarities using python difflib	fuzz	WRatio	a, b	1000	0	FAILED
id24	interprets which algorithm would be better to use and returns string similarities using python difflib	fuzz	WRatio	a, aa	1001	90	FAILED
id25	interprets which algorithm would be better to use and returns string similarities using python difflib	fuzz	WRatio	This is a test,	0	0	PASSED
id3	Returns ratio of strings similarity as a percentage, using python difflib	fuzz	ratio	a, b	1000	0	FAILED
id4	Returns ratio of strings similarity as a percentage, using python difflib	fuzz	ratio	a, Aa	1001	67	FAILED
id5	Returns ratio of strings similarity as a percentage, using python difflib	fuzz	ratio	This is a test,	0	0	PASSED
id6	Returns the ratio of the most similar substrings as a percentage	fuzz	partial_ratio	This is a test, This is a tess	928	92	FAILED
id7	Returns the ratio of the most similar substrings as a percentage	fuzz	partial_ratio	, a	0	0	PASSED
id8	Returns the ratio of the most similar substrings as a percentage	fuzz	partial_ratio	a, b	0	0	PASSED
id9	Returns the ratio of the most similar substrings as a percentage	fuzz	partial_ratio	a, aa	100	100	PASSED