INPUT SPACE PARTITIONING REPORT

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INTRODUCTION

Designing tests using input space partitioning methods both interfaced-based and functionality-based. Creating a system that converts the representation of a number between roman numerals and arabic numerals.

INTERFACE BASED APPROACH

Integer

characteristic	b1	b2	b3
Relation with zero	negative	positive	zero
Maximum Integer	True	False	

Justification :

When we consider an integer, there are two types, negative and positive integers. Zero is neither negative nor positive. Hence considering these three blocks would be complete as well as disjoint.

Similarly finding if the number is maximum or not would result in either True or False as blocks.

String

characteristic	b1	b2
Is Null	True	False
Is Empty	True	False

Justification:

A null string is a string with no value and an empty string is a string which has a zero length. Hence these characteristics help us understand the type of a string and they are disjoint.

FUNCTIONALITY BASED APPROACH

Roman

characteristic	b1	b2	b3
Converts	Single digit	Different digits	Subtractive notation

Justification:

Here, the characteristic converts represents how the digits are getting converted into a roman number. Hence the blocks single digit which means converting from a single digit, different digits and subtractive notation makes it complete and disjoint.

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Arabic

characteristic	b1	b2
Range	Greater	Lesser
Is decimal	True	False

Justification:

Range if arabic numbers will vary hence we are considering greater and lesser as blocks which makes it complete and disjoint.

TESTCASE CRITERION

Each choice coverage : One value from each block for each characteristic must be used in at least one test case.

There are so many possible subsets. For example the roman values can be represented in the range 1 to 3999. Writing test cases for all possible values would be infeasible. Hence, we consider a test case for each block and perform the tests.

The systems have been obtained from GeeksforGeeks and Software Testing: From theory to Practice.

RESULTS

Description:

String to Roman :

Enter : 3

"III"

Integer from Roman:

Enter Roman: XI

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CONCLUSION

After running the test suites, each characteristic that has been considered for each approach has been executed using the blocks. The division gave more confidence as the blocks are complete and disjoint.