

## CMSC435 Software Engineering

### Quiz 09

Name:

Consider a function `foo()` that takes three parameters A, B and C as input.

Parameters A, B and C can take values 1, 2 and 3.

What is the size of `foo`'s input space?

How many test cases are needed to exhaustively test `foo`? List all these test cases.

If we used pair-wise testing on `foo`, what is the smallest number of test cases that will cover all pairs? Explain your reasoning. Show the test cases.

Size of `foo`'s input space – 27

a1 b1 c1	a2 b1 c1	a3 b1 c1
a1 b1 c2	a2 b1 c2	a3 b1 c2
a1 b1 c3	a2 b1 c3	a3 b1 c3
a1 b2 c1	a2 b2 c1	a3 b2 c1
a1 b2 c2	a2 b2 c2	a3 b2 c2
a1 b2 c3	a2 b2 c3	a3 b2 c3
a1 b3 c1	a2 b3 c1	a3 b3 c1
a1 b3 c2	a2 b3 c2	a3 b3 c2
a1 b3 c3	a2 b3 c3	a3 b3 c3

Using Pair-wise testing, number of test cases that will cover all pairs - 9

These 9 test cases are highlighted in blue.

In programming, a fault will most likely depend on the values of two parameters, not three.