

# Using Decision Tables for Functional Testing

## Template for Decision Table

Stub	Rule 1	Rule 2	Rule 3	Rule 4	Rule 5	Rule 6
c1	T	T	T	F	-	T
c2	F	T	T	T	-	T
c3	T	T	-	T	T	T
c4	T	F	F	T	T	T
a1	X	X		X	X	X
a2		X				
a3	X			X		
a4			X			X

## Triangle Problem

c1: $a < b + c$ ?	F	T	T	T	T	T	T	T	T	T	T
c2: $b < a + c$ ?	-	F	T	T	T	T	T	T	T	T	T
c3: $c < a + b$ ?	-	-	F	T	T	T	T	T	T	T	T
c4: $a = b$ ?	-	-	-	T	T	T	T	F	F	F	F
c5: $a = c$ ?	-	-	-	T	T	F	F	T	T	F	F
c6: $b = c$ ?	-	-	-	T	F	T	F	T	F	T	F
a1: Not a Triangle	X	X	X								
a2: Scalene											X
a3: Isosceles						X		X	X		
a4: Equilateral				X							
a5: Impossible					X	X		X			

## With “Rule Counts”

c1: $a < b + c$ ?	F	T	T	T	T	T	T	T	T	T	T
c2: $b < a + c$ ?	-	F	T	T	T	T	T	T	T	T	T
c3: $c < a + b$ ?	-	-	F	T	T	T	T	T	T	T	T
c4: $a = b$ ?	-	-	-	T	T	T	T	F	F	F	F
c5: $a = c$ ?	-	-	-	T	T	F	F	T	T	F	F
c6: $b = c$ ?	-	-	-	T	F	T	F	T	F	T	F
Rule Count	32	16	8	1	1	1	1	1	1	1	1
a1: Not a Triangle	X	X	X								
a2: Scalene											X
a3: Isosceles						X		X	X		
a4: Equilateral				X							
a5: Impossible					X	X		X			

## Final Decision Table

c1: a,b,c form a triangle?	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
c2: $a = b$ ?	-	Y	Y	Y	Y	N	N	N	N	N
c3: $a = c$ ?	-	Y	Y	N	N	Y	Y	N	N	N
c4: $b = c$ ?	-	Y	N	Y	N	Y	N	Y	N	N
a1: Not a Triangle	X									
a2: Scalene										X
a3: Isosceles					X		X	X		
a4: Equilateral		X								
a5: Impossible			X	X		X				

Reference: Ferriday, Cai, “A Review Paper on Decision Table-Based Testing”

<http://cs.swan.ac.uk/~csmarkus/CS339/dissertations/FerridayC.pdf>