CS 3250: Software Testing (Fall 2025)

Activity: Logic coverage

(no submission)

Purpose: Understand the basic concept of logic coverage criteria (predicate coverage, clause coverage); get started to work on homework assignment; prepare for quiz 4 and final exam

You may make a copy of a worksheet and complete this activity, or type your answers in any text editor. You may work alone or with at most two other students in this course.

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1. Consider the following predicate and answer the questions

```
p = a + (bc)
note: you may view the predicate as     p = a OR (b AND c)
```

Row#	a	b	c	p
1	T	T	T	**T**
2	T	T		**T**
3	T		T	**T**
4	T			**T**
5		T	T	**T**
6		T		
7			T	
8				

```
Blank for F
```

1.1. List test requirements that satisfy **predicate coverage (PC)**

There are many possible answers.
PC requires 2 tests: one test to evaluate P=T, one test to evaluate P=F

Here are some possible answers (only 1 pair of tests is needed to satisfy PC)
(1, 8), (2,8), (5,6)

1.2. List test requirements that satisfy **clause coverage (CC)**

There are many possible answers.
CC requires 2 tests: one test to evaluate c=T, one test to evaluate c=F

Here are some possible answers (only 1 pair of tests is needed to satisfy CC)
(1,8), (2,7), (4,5)

2. Consider the following predicate and answer the questions

```
p = a (b + c)
note: you may view the predicate as     p = a AND (b OR c)
```

Row#	a	b	c	p
1	T	T	T	**T**
2	T	T		**T**
3	T		T	**T**
4	T			
5		T	T	
6		T		
7			T	
8				

Blank for F

2.1. List test requirements that satisfy **predicate coverage (PC)**

There are many possible answers.
PC requires 2 tests: one test to evaluate P=T, one test to evaluate P=F

Here are some possible answers (only 1 pair of tests is needed to satisfy PC)
(1, 8), (1,4), (3,5)

2.2. List test requirements that satisfy **clause coverage (CC)**

There are many possible answers.
CC requires 2 tests: one test to evaluate c=T, one test to evaluate c=F

Here are some possible answers (only 1 pair of tests is needed to satisfy CC)
(1,8), (3,6), (4,5)