Software Testing Mentor

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ISTQB Foundation Level and Software Testing Training

Module 4
Test Design Techniques

Session 3 – Part 2 – Specification-based or Black-box Techniques

In part 2 of session 3 we will learn about Decision Tables Testing

- Decision Tables Testing

Decision Table Testing

Decision table shows different combination of inputs with their associated outputs, this is also known as cause effect table.

Decision table is made up of

- Conditions: Inputs
- Actions/Outcomes

Decision table testing is used if different combinations of inputs result in different actions

Decision table is more efficient in testing business rules

Decision table provides a systematic way of stating complex business rule which makes it very helpful

Decision table aids in systematic selection of effective test cases and helps in finding any ambiguities in specifications

A Decision Table

Conditions	TC1	TC2	TC3	TC4
Condition1	T	T	F	F
Condition2	T	F	T	F
Actions/Outcome				
Outcome 1	Y	Y		
Outcome 2	Y			

Each condition is set to show the input. Conditions are usually set to true or false.

For each condition the output is determined.

Each column in decision table represents a unique business rule and so it is a test case

Using decision table for test design

The first task to design decision table is to identify the component or system which reacts according to the combination of inputs

Do not deal with large number of conditions all at once, divide them into smaller subsets and test one subset at a time

Once the conditions for component are identified then they are put in a table listing true and false for each aspect

Decision table testing example

Let us take an example of loan EMI calculator to understand decision table testing

The test condition for loan EMI calculator can be Loan amount or repayment term

The empty decision table for this example will look something like this

Conditions	Rule1/TC1	Rule2/TC2	Rule3/TC3	Rule4/TC4
Repayment amount entered				
Repayment term entered				

Decision table testing example cont.

Conditions	Rule1/TC1	Rule2/TC2	Rule3/TC3	Rule4/TC4
Repayment amount entered	T	T	F	F
Repayment term entered	T	F	T	F
Actions/Outcomes				
Process loan EMI	Y			

In the above table we are not clear about the outcome for Rule2, Rule 3 and Rule4. We can assume that both conditions are mandatory for processing the loan. So modified decision table will be like:

Conditions	Rule1/TC1	Rule2/TC2	Rule3/TC3	Rule4/TC4
Repayment amount entered	T	T	F	F
Repayment term entered	T	F	T	F
Actions/Outcomes				
Process loan EMI	Y			
Error message		Y	Y	Y

Mortgage calculator example cont.

http://www.yourmortgage.com.au/calculators/

Conditions	TC1	TC2	TC3	TC4	TC5	TC6	TC7	TC8
Loan amount	T	T	T	T	F	F	F	F
Interest rate	T	T	F	F	T	T	F	F
Loan period	T	F	T	F	T	F	T	F
Outcome								
Result	Success	Error (loan period)	Error (Enter rate)	Error (Enter rate and period)	Error (Enter loan amount)	Error (Enter loan amount, loan period)	Error (Loan amount, rate)	Error (Amount, Rate and Period)

Conclusion

In this session we learned about

- Decision Tables testing
- Live example using mortgage calculator

THANK YOU!!!