BLACK BOX EXERCISES

Partitioning Technique

Exercise 5

Apply the equivalence partitioning black box technique to obtain the test cases for a program which updates the price of product and receives as an input the following:

- **Product-code**: a field of 5 chars, which can be any combination of letters or numbers
- **Sale-percentage**: a positive double field minor or equal to 100.
- **Responsible**: the code of the employee who decides that the product is on sale. It is an alphanumeric field, with 6 char. The first char can be M, G or A, considering the category of the employee. The following 5 should be numbers.

The possible exits are:

1. When the product code is incorrect
2. When the sale-percentage is incorrect
3. When the responsible code is incorrect
4. When the product-code is successfully updated.
5. If the product is successfully updated but the sale-percentage is greater than 50.

NOTE: In the database of the company it is possible to find a product with the code ‘F0001’

Exercise 5

* For numbering the valid classes, we combine the result provided by the heuristic as much as possible. Thus, getting the valid test cases is easier

Input	Valid Classes	Invalid Classes	Heuristic
Product-code	(1) Alphanumeric of 5 digits * See note	(2) No alphanumeric (3) < 5 digits (4) > 5 digits	Boolean Finite Values
Sale-percentage	(5) [0,50] (6)]50,100]	(7) <0 (8) > 100	Range of values Reduced classes Range of values
Responsible	(9) Alphanumeric with 6 char, with the 1st char in = {M,A,G} and the last ones are a number	(12)<6 char (13)>6 char (14) 1st Char not in {M,A,G} (15) 2nd to 6th char are not a number	Finite Values Set of Values Boolean

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* For numbering the valid classes, we combine the result provided by the heuristic as much as possible. Thus, getting the valid test cases is easier

Input	Valid Classes	Invalid Classes	Heuristic
Product-code	(1) Alphanumeric of 5 digits * See note	(2) No alphanumeric (3) < 5 digits (4) > 5 digits	Boolean Finite Values
Sale-percentage	(5) [0,50] (6)]50,100]	(7) <0 (8) > 00	Range of values, reduced classes
Responsible	(9) Alphanumeric with 6 char, with the 1st char in = {M,A,G} and the last ones are a number * See note	(12)<6 char (13)>6 char (14) 1st Char not in {M,A,G} (15) 2nd to 6th char are not a number	Finite Values Boolean

T.C. Valid C.	Valid Classes	Input	Output
	(1)(5)(9)	Product-code="F0001"; sale-percentage=10; Responsible="G12345"	4
	(1)(6)(9)	Product-code="F0001"; sale-percentage=90; Responsible="M12345"	5

Exercise 5

Input	Valid Classes	Invalid Classes
Product-code	(1) Alphanumeric of 5 digits * See note	(2) No alphanumeric (3) < 5 digits (4) > 5 digits
Sale-percentage	(5) [0,50] (6)]50,100]	(7) <0 (8) > 00
Responsible	(9) Alphanumeric with 6 char, with the 1st char in = {M,A,G} and the last ones are a number * See note	(12)<6 char (13)>6 char (14) 1st Char not in {M,A,G} (15) 2nd to 6th char are not a number

T.C. Invalid C.

Invalid Class	Input	Output
(**2**)(5)(9)	Product-code="?1234"; sale-percentage=10; Responsible="G12345"	1
(**3**)(5)(9)	Product-code="1234"; sale-percentage=10; Responsible="G12345"	1
(**4**)(5)(9)	Product-code="123456"; sale-percentage=10; Responsible="G12345"	1
(1)(**7**)(9)	Product-code="C0001"; sale-percentage= -10; Responsible="G12345"	2
(1)(**8**)(9)	Product-code="C0001"; sale-percentage=110; Responsible="G12345"	2
(1)(5)(**12**)	Product-code="C0001"; sale-percentage=10; Responsible="G1234"	3
(1)(5)(**13**)	Product-code="C0001"; sale-percentage=10; Responsible="G123456"	3
(1)(5)(**14**)	Product-code="C0001"; sale-percentage=10; Responsible="B12345"	3
(1)(5)(**15**)	Product-code="C0001"; sale-percentage=10; Responsible="Gabcde"	3