BLACK BOX EXERCISES

Partitioning Technique

Exercise 1

- Apply the equivalence partitioning black box technique to obtain the test cases for a software module that classifies individuals according to the following inputs:
  - Code: string of 3 digits not starting with "00"
  - Control character: A character in 'a'..'z' or character '-'
  - Person Type: 'hired' or 'interim'
- The expected output values are:
  - "S1", if the code represents an even number and person is "hired".
  - "S2", if the code represents an even number and person is "interim".
  - "S3", if the code represents an odd number and person is "hired".
  - "S4", if the code represents an odd number and person is "interim".
  - "S5", if the control character is "-".
  - "S6", otherwise.
- Note: in case of conflict, S5 has more priority.

Exercise 1

Input	Valid Classes	Invalid Classes	Heuristic
Code	(1) 3 char, even number, which no starts by ‘00’ (2) 3 char, odd number, which no starts by ‘00’	(3) No number (4) (less 3 digit) (5) (more 3 digit) (6) Starts by ‘00’	Boolean Finit Values, minor clases Boolean
Control Character	(7) Vaue in [‘a’..’z’] (8) ‘-’	(9) <‘a’ (under lower, except -) (10) >’z’ (upper highest)	Range Values
Person	(11) ‘hired’ (12) ‘interim’	(13) ‘noaccepted’	Set of values

Exercise 1

Input	Valid Classes	Invalid Classes	Heuristic
Code	(1) 3 char, even number, which no starts by '00' (2) 3 char, odd number, which no starts by '00'	(3) No number (4) (less 3 digit) (5) (more 3 digit) (6) Starts by '00'	Boolean Finit Values, minor clases Boolean
Control Character	(7) Vaue in ['a'..'z'] (8) '-'	(9) <'a' (under lower, except -) (10) >'z' (upper highest)	Range Values
Person	(11) 'hired' (12) 'interim'	(13) 'noaccepted'	Set of values

T.C. Valid C.

Valid Classes	Input	Output
(1)(7)(11)	Code='222'; Control = 'b'; Person= 'hired'	S1
(2)(8)(12)	Code='111'; Control = '-'; Person= 'interim'	S5

T.C. Invalid C.

Invalid Class	Input	
(3)(7)(11)	Code='code'; Control = 'b'; Person= 'hired'	S6
(4)(7)(11)	Code='90'; Control = '-'; Person= 'hired'	S6
(5)(7)(11)	Code='1000'; Control = 'b';Person= 'hired'	S6
(6)(7)(11)	Code='001'; Control = 'b'; Person= 'hired'	S6
(1)(**9**)(11)	Code='222'; Control = 'Z'; Person= 'hired'	S6
(2)(**10**)(11)	Code='111'; Control = '|'; Person= 'hired'	S6
(1)(7)(**13**)	Code='222'; Control = 'b'; Person='noaccepted'	S6

Exercise 2

- Applying the black box equivalence partitioning testing technique, obtain the test cases for the following software module that classifies individuals according to the following inputs:
  - Creation date: string with format “dd-mm-yyyy” representing a valid date
  - Type of person: “student” or “professor”
- The expected output values are:
  - “S1”, if the month is 08 and the person is a student.
  - “S2”, if the month is not 08 and the person is a professor.
  - “S3”, if the person is student or professor.
  - “S4”, in any other correct case.
  - “S5”, in any other incorrect case.
- **Note**. The order of evaluation (priority) of each output is S1..S5.

Exercise 2

Input	Valid Classes	Invalid Classes	Heuristic
Creation date	(1) Valid date, with month 08 (2) Valid date, with mont <> 08	(3) No valid date	Boolean Reduced class
Type of person	(7) “student” (8) “professor”	(9) “other”	Set of values

Exercise 2

Input	Valid Classes	Invalid Classes	Heuristic
Creation date	(1) Valid date, with month 08 (2) Valid date, with mont <> 08	(3) No valid date	Boolean
Type of person	(7) “student” (8) “professor”	(9) “other”	Set of values

T.C. Valid C.

Valid Classes	Input	Out
(1)(7)	Creation date =’10-08-2018’; Type of person = “student”	S1
(2)(8)	Creation date =’10-09-2018’; Type of person = “professor”	S2

T.C. Invalid C.

Invalid Class	Input	Out
(**3**)(7)	Creation date =’33-08-2018’; Type of person = “student”	S5
(1)(**9**)	Creation date =’10-08-2018’; Type of person = “other”	S5