Black Box Testing

Validation and Verification of Software

Cristian Gustavo Castro Xum Cristina Martín Bris

Input	Condition	Valid Equivalence Class	Invalid Equivalence Class
I.	Number of args <2 or >3		1) Number of arguments less than 12) Number of arguments greater than 3
II.	Number of args = 2	 3) 1st argument is either integer or real and 2nd argument is either integer or real and both numbers are less or equal than MAX_INTEGER. 4) 1st argument is either integer or real and 2nd argument is either integer or real and 2st argument is greater than the 1st argument and both numbers are less or equal than MAX_INTEGER. 	 5) 1st argument is neither integer nor real 6) 1st argument is integer or real and 2nd argument is neither integer nor real 7) At least one argument is greater than MAX_INTEGER
III.	Number of args = 3	 8) 1st argument is either integer or real and 2nd argument is either integer or real and 3th argument is either integer or real, different of zero and all arguments are less or equal than MAX_INTEGER. 9) 1st argument is either integer or real and 2nd argument is either integer or real and 3th argument is either integer or real, different of zero and the number argument are less or equal than MAX_INTEGER and 2nd argument greater than the first argument. 	 10) 1st argument is not integer not real 11) 1st argument is real or integer, 2nd argument is neither integer nor real. 12) 1st argument is real or integer, 2nd argument is real or integer, 3th argument is neither integer nor real. 13) 1st argument is either real or integer, 2nd argument is either real or integer, 3th argument is real or integer integer and its value is equal to zero. 14) At least one argument is greater than MAX_INTEGER

Eq. Class type	Valid Eq. classes			Invalid Eq. classes										
Input Condition II		I	II	I		II			III					
Eq. Class	3	4	8	9	1	2	5	6	7	10	11	12	13	14
TC1	-	-	-	-	Х	-	-	-	-	-	-	-	-	-
TC2	-	-	-	-	-	Х	-	-	-	-	-	-	-	-
TC3	Х	-	-	-	-	-	-	-	-	-	-	-	-	-
TC4	-	Х	-	-	-	-	-	-	-	-	-	-	-	-
TC5	-	-	Х	-	-	-	-	-	-	-	-	-	-	-
TC6	-	-	-	Х	-	-	-	-	-	-	-	-	-	-
TC7	-	-	-	-	-	-	Х	-	-	-	-	-	-	-
TC8	-	-	-	-	-	-	-	Х	-	-	-	-	-	-
TC9	-	-	-	-	-	-	-	-	Х	-	_	-	-	-
TC10	-		-	-	-	-	-	-	-	Х	-	-	-	-

TC11	-	-	-	-	-	-	-	-	-	-	Х	-	-	-
TC12	-	-	-	-	-	-	-	-	-	-	-	Х	-	-
TC13	-	-	-	-	-	-	-	-	-	-	-	-	Х	-
TC14	-	-	-	-	-	-	-	-	-	-	-	-	-	Х

Test case id	Test goal	Inputs	Expected output		
TC1	Test the program with no arguments	series	ERROR MESSAGE		
TC2	Test number of arguments greater than 3	series 1 10 2 4	ERROR MESSAGE		
TC3	Test with 2 valid arguments (begin, end)	series 1 10	1,2,3,4,5,6,7,8,9,10		
TC4	Test with with 2 valid arguments and second argument is less than first argument	series 5 1	5,4,3,2,1		
TC5	Test with 3 valid arguments	series 2, 6, 2	2,4,6		
TC6	Test with 3 valid arguments and second argument is less than first argument	series 6, 2, 2	6,4,2		
TC7	Test with two arguments and first is not valid argument	series m, 24	ERROR MESSAGE		
TC8	Test with with two argument and first is valid and second argument is not valid	series 1, m	ERROR MESSAGE		
TC9	Test with first argument greater than MAX_INTEGER	series 9999999999999999999999 9999999999999	ERROR MESSAGE		

		99999999999999999999999999999999999999	
TC10	Test with 3 arguments and first one is not valid	series m 10 5	ERROR MESSAGE
TC11	Test with 3 arguments where first argument real and second is not valid	series 1 m 5	ERROR MESSAGE
TC12	Test with 3 arguments where first and second arguments are valid but 3th argument is neither integer nor real	series 1 10 x	ERROR MESSAGE
TC13	Test with 3 arguments where first and second arguments are valid but 3th argument is zero	series 1 12 0	ERROR MESSAGE
TC14	Test with second argument greater than MAX_INTEGER	series 1 999999999999999999999999999999999999	ERROR MESSAGE