Relatorio BlackBox Test

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Conteúdo

1 Equivalence Class Partition (ECP)

1.1 Método String Classify ()

Pré-Condições

- Componente Inicializado atravez do construtor
- Inputs sempre positivos

1.1.1 Impossible

Criterios	**Class Válida**	**Class Invalida**
Nº Entradas	3	$\neq 3$
Tipos	int,int,int	$\neq$ int
Condição	$(side1 < side2 + side3) \mid\mid (side2 < side1 + side3) \mid\mid (side3 < side1 + side2)$	$(side1 \geq side2 + side3) \mid\mid (side2 \geq side1 + side3) \mid\mid (side3 \geq side2 + side3)$
Exemplos Input	$side1 = 1, side2 = 0, side3 = 1$	$side1 = 1, side2 = 1, side3 = 1$

1.1.2 equilateral

Criterios	**Class Válida**	**Class Invalida**
Nº Entradas	3	$\neq 3$
Tipos	int,int,int	$\neq$ int
Condição	$(side1 == side2 \;\&\&\; side1 == side3 \;\&\&\; side2 == side3)$	$(side1 \neq side2 \mid\mid side1 \neq side3 \mid\mid side2 \neq side3)$
Exemplos Input	$side1 = 1, side2 = 1, side3 = 1$	$side1 = 1, side2 = 1, side3 = 3$

1.1.3 Isossceles

Criterios	**Class Válida**	**Class Invalida**
Nº Entradas	3	$\neq 3$
Tipos	int,int,int	$\neq$ int
Condição	$(side1 == side2 \mid\mid side1 == side3 \mid\mid side2 == side3)$	$(side1 \neq side2 \;\&\&\; side1 \neq side3 \;\&\&\; side2 \neq side3)$
Exemplos Input	$side1 = 1, side2 = 1, side3 = 3$	$side1 = 1, side2 = 2, side3 = 3$

1.1.4 Right-Angled

Criterios	Class Válida	Class Invalida
Nº Entradas	3	$\neq 3$
Tipos	int,int,int	$\neq$ int
Condição	$(side1 > 0$ && $side2 > 0$ && $side3 > 0)$ && $(side1^2 + side2^2 == side3^2)$	$(side1 <= 0$ || $side2 <= 0$ || $side3 <= 0)$ $(side1^2 + side2^2 \neq side3^2)$
Exemplos Input	$side1 = 5$, $side2 = 12$, $side3 = 13$	$side1 = 1$, $side2 = 1$, $side3 = 3$

1.1.5 Scalene

Criterios	Class Válida	Class Invalida
Nº Entradas	3	$\neq 3$
Tipos	int,int,int	$\neq$ int
Condição	$(side1 \neq side2$ && $side1 \neq side3$ && $side2 \neq side3)$ && $(side1^2 + side2^2 \neq side3^2)$	$(side1 == side2$ || $side1 == side3$ || $side2 == side3)$ $(side1^2 + side2^2 == side3^2)$
Exemplos Input	$side1 = 3$, $side2 = 4$, $side3 = 2$	$side1 = 1$, $side2 = 1$, $side3 = 3$

2 Bondary Value Analysis (BVA)

2.1 Método String Classify ()

Condições

M *MaxInt*

R $\in \mathbb{Z}^+ : x > 0 \land x < MaxInt$

N *null*

Inputs	Min	Min Blow	Mid	Max	Max Above	Others
side1	0	-1	R	*MaxInt*	*MaxInt* +1	N
side2	0	-1	R	*MaxInt*	*MaxInt* +1	N
side3	0	-1	R	*MaxInt*	*MaxInt* +1	N

3 Test Cases

3.1 Método String Classify ()

Condições

M *MaxInt*

N *null*

3.1.1 ECP Test cases

Test ID	Input Cases	Expected	Result	Notes
#1	$(0, 0, 0)$	impossible	impossible	PASS
#2	$(2, 2, 2)$	equilateral	equilateral	PASS
#3	$(2, 2, 1)$	isossceles	isossceles	PASS
#4	$(5, 12, 13)$	right-angled	right-angled	PASS
#5	$(2, 3, 4)$	scalene	scalene	PASS
#6	$(4, 1, 1)$	(not) impossible	scalene	PASS
#7	$(1, 1, 3)$	(not) equilateral	isossceles	PASS
#8	$(1, 2, 3)$	(not) isossceles	scalene	PASS
#9	$(1, 1, 3)$	(not) right-angled	isossceles	PASS
#10	$(3, 4, 5)$	(not) scalene	right-angled	PASS

3.1.2 BVA Test cases

Test ID	Input Cases	Expected	Result	Notes
#1	$(1, 1, M + 1)$	impossible	impossible	PASS
#2	$(1, M + 1, 1)$	impossible	impossible	PASS
#3	$(1, M + 1, M + 1)$	impossible	impossible	PASS
#4	$(M + 1, 1, 1)$	impossible	impossible	PASS
#5	$(M + 1, 1, M + 1)$	impossible	impossible	PASS
#6	$(M + 1, M + 1$ $, M + 1)$	impossible	impossible	PASS
#7	$(1, 1, -1)$	impossible	impossible	PASS
#8	$(1, -1, 1)$	impossible	impossible	PASS
#9	$(1, -1, -1)$	impossible	impossible	PASS
#10	$(-1, 1, 1)$	impossible	impossible	PASS
#11	$(-1, 1, -1)$	impossible	impossible	PASS
#12	$(-1, 1, -1)$	impossible	impossible	PASS
#13	$(-1, -1, 1)$	impossible	impossible	PASS
#14	$(-1, -1, -1)$	impossible	impossible	PASS
#15	$(2, 1, N)$	NullException	...	Doesn't compile