**Universidade Federal do Rio Grande do Norte – UFRN**

**Centro de Ciências Exatas e da Terra – CCET**

**Departamento de Informática e Matemática Aplicada – DIMAp**

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**Relatório da Atividade – Unidade 2**

1. Liste um conjuntos de quatro características para as entradas do programa;

|  |  |  |
| --- | --- | --- |
| 1) Diametro da Bola | DB dentro da Faixa | 1 ≤ DB ≤ 10000 |
| 2) Altura da Caixa | AC dentro da Faixa | 1 ≤ AC ≤ 10000 |
| 3) Largura da Caixa | LC dentro da Faixa | 1 ≤ LC ≤ 10000 |
| 4) Profundidade da Caixa | PC dentro da Faixa | 1 ≤ PC ≤ 10000 |

1. Faça um particionamento criando três blocos (2 negativos e um positivo) para a variável *diametroBola*, três blocos(positivos) para *profundidadeCaixa*, dois blocos (um positivo e um negativo) para *alturaCaixa* e dois blocos (um positivo e um negativo) para *larguraCaixa;*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1 | diametroBola | 1.1 | DB dentro da faixa | 1 ≤ DB ≤ 10000 |
|  |  | 1.2 | DB menor que mínimo | DB < 1 |
|  |  | 1.3 | DB maior que máximo | DB > 10000 |
| 2 | alturaCaixa | 2.1 | AC dentro da faixa | 1 ≤ AC ≤ 10000 |
|  |  | 2.2 | AC fora da faixa | AC < 1 ou AC > 10000 |
| 3 | larguraCaixa | 3.1 | LC dentro da faixa | 1 ≤ LC ≤ 10000 |
|  |  | 3.2 | LC fora da faixa | LC < 1 ou LC > 10000 |
| 4 | profundidadeCaixa | 4.1 | PC mínimo | PC = 1 |
|  |  | 4.2 | PC médio | 1 < PC < 10000 |
|  |  | 4.3 | PC máximo | PC = 10000 |

TR – Each-choice

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| TR | 1.1 | 1.2 | 1.3 | 2.1 | 2.2 | 3.1 | 3.2 | 4.1 | 4.2 | 4.3 |

TR – All Combinations

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| T1 | 1.1 | 2.1 | 3.1 | 4.1 |
| T2 |  |  |  | 4.2 |
| T3 |  |  |  | 4.3 |
| T4 | 1.1 | 2.1 | 3.2 | 4.1 |
| T5 |  |  |  | 4.2 |
| T6 |  |  |  | 4.3 |
| T7 | 1.1 | 2.2 | 3.1 | 4.1 |
| T8 |  |  |  | 4.2 |
| T9 |  |  |  | 4.3 |
| T10 | 1.1 | 2.2 | 3.2 | 4.1 |
| T11 |  |  |  | 4.2 |
| T12 |  |  |  | 4.3 |
| T13 | 1.2 | 2.1 | 3.1 | 4.1 |
| T14 |  |  |  | 4.2 |
| T15 |  |  |  | 4.3 |
| T16 | 1.2 | 2.1 | 3.2 | 4.1 |
| T17 |  |  |  | 4.2 |
| T18 |  |  |  | 4.3 |
| T19 | 1.2 | 2.2 | 3.1 | 4.1 |
| T20 |  |  |  | 4.2 |
| T21 |  |  |  | 4.3 |
| T22 | 1.2 | 2.2 | 3.2 | 4.1 |
| T23 |  |  |  | 4.2 |
| T24 |  |  |  | 4.3 |
| T25 | 1.3 | 2.1 | 3.1 | 4.1 |
| T26 |  |  |  | 4.2 |
| T27 |  |  |  | 4.3 |
| T28 | 1.3 | 2.1 | 3.2 | 4.1 |
| T29 |  |  |  | 4.2 |
| T30 |  |  |  | 4.3 |
| T31 | 1.3 | 2.2 | 3.1 | 4.1 |
| T32 |  |  |  | 4.2 |
| T33 |  |  |  | 4.3 |
| T34 | 1.3 | 2.2 | 3.2 | 4.1 |
| T35 |  |  |  | 4.2 |
| T36 |  |  |  | 4.3 |

TR - Pairwise

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1.1 | 1.2 | 1.3 | 2.1 | 2.2 | 3.1 | 3.2 | 4.1 | 4.2 | 4.3 |
| 1.1 |  |  |  |  |  |  |  |  |  |  |
| 1.2 |  |  |  |  |  |  |  |  |  |  |
| 1.3 |  |  |  |  |  |  |  |  |  |  |
| 2.1 | **X** | **X** | **X-T27** |  |  |  |  |  |  |  |
| 2.2 | **X** | **X** | **X-T31** |  |  |  |  |  |  |  |
| 3.1 | **X** | **X** | **X-T27** | **X** | **X** |  |  |  |  |  |
| 3.2 | **X** | **X** | **X-T29** | **X** | **X** |  |  |  |  |  |
| 4.1 | **X** | **X** | **X-T27** | **X** | **X** | **X** | **X** |  |  |  |
| 4.2 | **X** | **X** | **X-T29** | **X** | **X** | **X** | **X** |  |  |  |
| 4.3 | **X** | **X** | **X-T31** | **X** | **X** | **X** | **X** |  |  |  |

Casos de Testes:

TR EACH-CHOICE

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Case | Caracter 1 | Caracter 2 | Caracter 3 | Caracter 4 |
| T1 | DB = 1 | AC = 1 | LC = 1 | PC = 1 |
| T23 | DB = 0 | AC = 10001 | LC = 0 | PC = 2 |
| T36 | DB = 10001 | AC = 0 | LC = 0 | PC = 10000 |

|  |  |
| --- | --- |
| Requisito | Casos de teste |
| 1.1 – 2.1 – 3.1 – 4.1 | T1 |
| 1.2 – 2.2 – 3.2 – 4.2 | T23 |
| 1.3 – 2.2 – 3.2 – 4.3 | T36 |

COBERTURA DO TR PAIRWISE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case | C 1 | C 2 | C 3 | C 4 |  |
| T1 | DB = 1 | AC = 1 | LC = 1 | PC = 1 | ( 1.1 – 2.1) (1.1 – 3.1) (1.1 – 4.1)  ( 2.1 – 3.1) (2.1 – 4.1) (3.1 – 4.1) |
| T2 | DB = 1 | AC = 1 | LC = 1 | PC = 2 | (1.1 – 4.2) (2.1 – 4.2) (3.1 – 4.2) |
| T3 | DB = 1 | AC = 1 | LC = 1 | PC = 10000 | (1.1 – 4.3) (2.1 – 4.3) (3.1 – 4.3) |
| T7 | DB = 1 | AC = 0 | LC = 1 | PC = 1 | (2.2 – 4.1) |
| T8 | DB = 1 | AC = 0 | LC = 1 | PC = 2 | (2.2 – 4.2) |
| T9 | DB = 1 | AC = 0 | LC = 1 | PC = 10000 | (2.2 – 3.1) (2.2 – 4.3) |
| T10 | DB = 1 | AC = 0 | LC = 0 | PC = 1 | (1.1 – 2.2) (1.1 – 3.2) (2.2 – 3.2) |
| T13 | DB = 0 | AC = 1 | LC = 1 | PC = 1 | (1.2 – 2.1) (1.2 – 3.1) (1.2 – 4.1) |
| T16 | DB = 0 | AC = 1 | LC = 10001 | PC = 1 | (2.1 – 3.2) (3.2 – 4.1) |
| T17 | DB = 0 | AC = 1 | LC = 10001 | PC = 2 | (3.2 – 4.2) |
| T18 | DB = 0 | AC = 1 | LC = 10001 | PC = 10000 | (3.2 – 4.3) |
| T22 | DB = 0 | AC = 10001 | LC = 0 | PC = 1 | (1.2 – 2.2) (1.2 – 3.2) |
| T23 | DB = 0 | AC = 10001 | LC = 0 | PC = 2 | (1.2 – 4.2) |
| T24 | DB = 0 | AC = 10001 | LC = 0 | PC = 10000 | (1.2 – 4.3) |
| T27 | DB = 10001 | AC = 1 | LC = 1 | PC = 10000 | (1.3 – 2.1) (1.3 – 3.1) (1.3 – 4.1) |
| T29 | DB = 10001 | AC = 1 | LC = 10001 | PC = 2 | (1.3 – 3.2) (1.3 – 4.2) |
| T31 | DB = 10001 | AC = 0 | LC = 1 | PC = 1 | (1.3 – 2.2) (1.3 – 4.3) |

TR ALL COMBINATIONS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Case | C 1 | C 2 | C 3 | C 4 |
| T1 | DB = 1 | AC = 1 | LC = 1 | PC = 1 |
| T2 | DB = 1 | AC = 1 | LC = 1 | PC = 2 |
| T3 | DB = 1 | AC = 1 | LC = 1 | PC = 10000 |
| T4 | DB = 1 | AC = 1 | LC = 10001 | PC = 1 |
| T5 | DB = 1 | AC = 1 | LC = 10001 | PC = 2 |
| T6 | DB = 1 | AC = 1 | LC = 10001 | PC = 10000 |
| T7 | DB = 1 | AC = 0 | LC = 1 | PC = 1 |
| T8 | DB = 1 | AC = 0 | LC = 1 | PC = 2 |
| T9 | DB = 1 | AC = 0 | LC = 1 | PC = 10000 |
| T10 | DB = 1 | AC = 0 | LC = 0 | PC = 1 |
| T11 | DB = 1 | AC = 0 | LC = 0 | PC = 2 |
| T12 | DB = 1 | AC = 0 | LC = 0 | PC = 10000 |
| T13 | DB = 0 | AC = 1 | LC = 1 | PC = 1 |
| T14 | DB = 0 | AC = 1 | LC = 1 | PC = 2 |
| T15 | DB = 0 | AC = 1 | LC = 1 | PC = 10000 |
| T16 | DB = 0 | AC = 1 | LC = 10001 | PC = 1 |
| T17 | DB = 0 | AC = 1 | LC = 10001 | PC = 2 |
| T18 | DB = 0 | AC = 1 | LC = 10001 | PC = 10000 |
| T19 | DB = 0 | AC = 10001 | LC = 1 | PC = 1 |
| T20 | DB = 0 | AC = 10001 | LC = 1 | PC = 2 |
| T21 | DB = 0 | AC = 10001 | LC = 1 | PC = 10000 |
| T22 | DB = 0 | AC = 10001 | LC = 0 | PC = 1 |
| T23 | DB = 0 | AC = 10001 | LC = 0 | PC = 2 |
| T24 | DB = 0 | AC = 10001 | LC = 0 | PC = 10000 |
| T25 | DB = 10001 | AC = 1 | LC = 1 | PC = 1 |
| T26 | DB = 10001 | AC = 1 | LC = 1 | PC = 2 |
| T27 | DB = 10001 | AC = 1 | LC = 1 | PC = 10000 |
| T28 | DB = 10001 | AC = 1 | LC = 10001 | PC = 1 |
| T29 | DB = 10001 | AC = 1 | LC = 10001 | PC = 2 |
| T30 | DB = 10001 | AC = 1 | LC = 10001 | PC = 10000 |
| T31 | DB = 10001 | AC = 0 | LC = 1 | PC = 1 |
| T32 | DB = 10001 | AC = 0 | LC = 1 | PC = 2 |
| T33 | DB = 10001 | AC = 0 | LC = 1 | PC = 10000 |
| T34 | DB = 10001 | AC = 0 | LC = 0 | PC = 1 |
| T35 | DB = 10001 | AC = 0 | LC = 0 | PC = 2 |
| T36 | DB = 10001 | AC = 0 | LC = 0 | PC = 10000 |