Input space partition

## (1) Each choice coverage

|  |  |  |  |
| --- | --- | --- | --- |
| A | B | C | EO |

|  |  |  |  |
| --- | --- | --- | --- |
| -1 | -1 | -1 | 4 |
| 0 | 0 | 0 | 4 |
| 1 | 1 | 1 | 3 |
| 1 | 2 | 2 | 2 |
| 2 | 3 | 4 | 1 |

## (2) Pair-wise coverage

|  |  |  |  |
| --- | --- | --- | --- |
| A | B | C | EO |

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | -1 | 1 | 4 |
| 0 | 0 | 1 | 4 |
| 0 | 1 | -1 | 4 |
| 0 | 1 | 0 | 4 |
| 1 | 2 | 1 | 4 |
| 1 | 1 | 1 | 3 |
| 1 | 1 | -1 | 4 |
| 1 | 0 | 1 | 4 |
| -1 | -1 | 0 | 4 |
| -1 | 0 | 1 | 4 |
| -1 | 1 | 1 | 4 |
| -1 | 1 | -1 | 4 |
| 2 | 0 | 0 | 4 |
| 2 | 3 | 4 | 1 |
| 2 | 2 | 2 | 3 |
| 2 | 3 | 3 | 2 |

2.Graph coverage

## Node coverage

|  |  |  |  |
| --- | --- | --- | --- |
| A | B | C | EO |

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | 1 | 1 | 4 |
| 1 | 1 | 1 | 3 |
| 2 | 3 | 2 | 2 |
| 2 | 2 | 3 | 2 |
| 2 | 4 | 2 | 4 |
| 3 | 2 | 2 | 2 |
| 4 | 2 | 2 | 4 |
| 1 | 2 | 3 | 4 |
| 2 | 3 | 4 | 1 |
| 2 | 3 | 3 | 2 |

## edge coverage

|  |  |  |  |
| --- | --- | --- | --- |
| A | B | C | EO |

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | 1 | 1 | 4 |
| 1 | 1 | 1 | 3 |
| 2 | 3 | 2 | 2 |
| 2 | 2 | 3 | 2 |
| 2 | 4 | 2 | 4 |
| 3 | 2 | 2 | 2 |
| 4 | 2 | 2 | 4 |
| 1 | 2 | 3 | 4 |
| 2 | 3 | 4 | 1 |
| 2 | 3 | 3 | 2 |

## prime path coverage

|  |  |  |  |
| --- | --- | --- | --- |
| A | B | C | EO |

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | 1 | 1 | 4 |
| 1 | 1 | 1 | 3 |
| 2 | 3 | 2 | 2 |
| 2 | 2 | 3 | 2 |
| 2 | 4 | 2 | 4 |
| 3 | 2 | 2 | 2 |
| 4 | 2 | 2 | 4 |
| 1 | 2 | 3 | 4 |
| 2 | 3 | 4 | 1 |
| 2 | 3 | 3 | 2 |

## all-use coverage

|  |  |  |  |
| --- | --- | --- | --- |
| A | B | C | EO |

|  |  |  |  |
| --- | --- | --- | --- |
| -1 | 1 | 1 | 4 |
| 2 | 2 | 4 | 4 |
| 2 | 4 | 2 | 4 |
| 4 | 2 | 2 | 4 |
| 2 | 3 | 5 | 4 |

3.Logic coverage

## Predicate coverage

**T F**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | B | C | EO |  | A | B | C |  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 0 | 0 | 4 |  | 1 | 1 | 1 | 3 |
| 1 | 1 | 1 | 3 | 1 | 2 | 2 | 2 |
| 1 | 1 | 1 | 3 | 1 | 2 | 2 | 2 |
| 1 | 1 | 1 | 3 | 2 | 1 | 2 | 2 |
| 1 | 2 | 3 | 4 | 1 | 1 | 1 | 3 |
| 1 | 2 | 3 | 4 | 2 | 3 | 4 | 1 |
| 1 | 1 | 1 | 3 | 2 | 2 | 3 | 2 |
| 2 | 2 | 3 | 2 | 2 | 2 | 4 | 4 |
| 2 | 3 | 2 | 2 | 3 | 4 | 2 | 4 |
| 3 | 2 | 2 | 2 | 4 | 2 | 2 | 4 |

## clause coverage

**T F**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | B | C | EO |  | A | B | C | EO |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 1 | 4 |  | 1 | 1 | 1 | 3 |
| 1 | 0 | 1 | 4 | 1 | 1 | 1 | 3 |
| 1 | 1 | 0 | 4 | 1 | 1 | 1 | 3 |
| 2 | 3 | 6 | 4 | 2 | 3 | 4 | 1 |
| 6 | 2 | 3 | 4 | 2 | 3 | 4 | 1 |
| 2 | 6 | 3 | 4 | 2 | 3 | 4 | 1 |
| 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 |
| 2 | 2 | 3 | 2 | 2 | 2 | 5 | 4 |
| 2 | 3 | 2 | 2 | 3 | 2 | 2 | 2 |
| 2 | 3 | 2 | 2 | 2 | 5 | 2 | 4 |
| 1 | 2 | 2 | 2 | 1 | 2 | 1 | 4 |
| 3 | 2 | 2 | 2 | 5 | 2 | 2 | 4 |

## Correlated Active Clause Coverage

|  |  |  |  |
| --- | --- | --- | --- |
| A | B | C | EO |
| 0 | 1 | 1 | 4 |

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 1 | 1 | 3 |
| 1 | 0 | 1 | 4 |
| 1 | 1 | 0 | 4 |
| 2 | 3 | 6 | 4 |
| 2 | 3 | 4 | 1 |
| 6 | 2 | 3 | 4 |
| 2 | 6 | 3 | 4 |
| 2 | 2 | 3 | 2 |
| 2 | 3 | 3 | 2 |
| 2 | 2 | 5 | 4 |
| 2 | 3 | 3 | 2 |
| 2 | 3 | 3 | 2 |
| 2 | 5 | 2 | 4 |
| 3 | 2 | 2 | 2 |
| 1 | 2 | 2 | 4 |
| 5 | 2 | 2 | 4 |

4. mutation testing

## (1) TritypMutantOne

原本

|  |  |  |  |
| --- | --- | --- | --- |
| A | B | C | EO |
| 2 | 2 | 4 | 4 |

实际:

|  |  |  |  |
| --- | --- | --- | --- |
| A | B | C | EO |
| 2 | 2 | 4 | 2 |

## (2) TritypMutantTwo

原本

|  |  |  |  |
| --- | --- | --- | --- |
| A | B | C | EO |
| 2 | 2 | 4 | 4 |

实际

|  |  |  |  |
| --- | --- | --- | --- |
| A | B | C | EO |
| 2 | 2 | 4 | 2 |