TEST CASES

* “Check user input” test cases

|  |  |  |
| --- | --- | --- |
| Test cases | input | Expected output |
| T1 | “8” | 8 |
| T2 | “8.5” | 8.5 |
| T3 | “Alien” | Input is not a real number |
| T4 | “” | Input can’t be empty |

* Addition test cases

|  |  |  |  |
| --- | --- | --- | --- |
| Test cases | x | y | Expected output |
| T1 | 8 | 5 | 13 |

* Subtraction test cases

|  |  |  |  |
| --- | --- | --- | --- |
| Test cases | x | y | Expected output |
| T1 | 8 | 5 | 3 |

* Multiplication test cases

|  |  |  |  |
| --- | --- | --- | --- |
| Test cases | x | y | Expected output |
| T1 | 5 | 5 | 25 |

* Division test cases

|  |  |  |  |
| --- | --- | --- | --- |
| Test cases | x | y | Expected output |
| T1 | 0 | 8 | 0 |
| T2 | 8 | 5 | 1.6 |
| T3 | 8 | 0 | “Divided By Zero” |

* Calculation test cases

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test cases | num1 | num2 | choice | Expected result |
| TC1 | “Alien” | 5 | “1” | Num1: input is not a real number  Num2: 5 |
| TC2 |  |  | “1” | Inputs can’t be empty |
| TC3 | “” | “” | “1” | Inputs can’t be null |
| TC4 | 5.0 | 5.0 | “1” | 10.0 |
| TC5 | 8 | 5 | “1” | 13 |
| TC6 | 8 | 5 | “2” | 3 |
| TC7 | 8.0 | 5.0 | “2” | 3.0 |
| TC8 | 8 | 5 | “3” | 40 |
| TC9 | 8.0 | 5.0 | “3” | 40.0 |
| TC10 | 8 | 5 | “4” | 1.6 |
| TC11 | 8 | 0 | “4” | Divided by zero |
| TC12 | 0 | 5 | “4” | 0 |
| TC13 | 8.0 | 5.0 | “4” | 1.6 |
| TC14 | 0 | 5.0 | “4” | 0 |
| TC15 | 8.0 | 0 | “4” | Divided by zero |
| TC16 | 8 | 5 | “808” | Invalid choice |

* iExit function test cases

|  |  |  |
| --- | --- | --- |
| Test cases | next\_calculation | Expected output |
| TC1 | “Yes” | False |
| TC2 | “No” | True |
| TC3 | “Alien” | Invalid Choice |

Statement Coverage

* Paths for “check input user” function

Min total paths (Ps):

|  |  |
| --- | --- |
| P1 | S,1,2,3,E |
| P2 | S,1,2,4,5,E |
| P3 | S,1,2,4,6,7,8,E |
| P4 | S,1,2,4,6,7,9,10,E |

* List of paths for Add function

Min total paths (Ps):

|  |  |
| --- | --- |
| P1 | S,1,2,3,E |

* List of paths for Subtract function

Min total paths (Ps):

|  |  |
| --- | --- |
| P1 | S,1,2,3,E |

* List of paths for Multiplication function

Min total paths (Ps):

|  |  |
| --- | --- |
| P1 | S,1,2,3,E |

* List of paths for Division function

Min total paths (Ps):

|  |  |
| --- | --- |
| P1 | S,1,2,3,E |
| P2 | S,1,2,4,5,E |
| P3 | S,1,2,4,6,7,E |

* List of paths for isExit function

Min total paths (Ps):

|  |  |
| --- | --- |
| P1 | S,1,2,3,E |
| P2 | S,1,2,4,6,E |
| P3 | S,1,2,4,5,E |