**AC12001**

Name: …Deji Shote…………………………………………………………………………..

Lab Title: …AC12001 assignment 1: Stacks………………………………..……….

Test number/date/version: 30/01/18 ……………………………………….……..

Test Notes: …Tests run on submitted assignment ……………………………

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| --- | --- | --- | --- |
| **Test Description** | **Test Data** | **Expected result** | **Worked?** |
| **Menu Test** | | | |
| Starts Calculator | Press 1 (input to start calculator) | Calculator should work | Y |
| Exit program | Press 0 | Program should exit | Y |
| **Positive Calculation Test** | | | |
| Input a singular number into calculator | Press 2 | Program should print text “The final result is 2” | Y |
| RPN calculation addition | 4,5,+ | 9 | Y |
| RPN calculation complex addition | 4,6,2,+,+,5,+ | 17 | Y |
| Wrong RPN calculation | 9,+ | Says that this isn’t a valid input and starts the calculator again. | Y |
| RPN calculation Subtraction | 4,5,- | 1 | Y |
| RPN calculation complex Subtraction | 4,6,2,-,-,5,- | -5 | Y |
| RPN calculation multiplication | 4,5,\* | 20 | Y |
| RPN calculation complex multiplication | 4,6,2,\*,\*,5,\* | 240 | Y |
| RPN calculation division | 4,5,/ | 0.8 | Y |
| RPN calculation complex division | 4,6,2,/,/,5,/ | 0.266666 | Y |
| **Negative Calculation Test** | | | |
| RPN calculation addition | -4,-5,+ | -9 | Y |
| RPN calculation complex addition | 4,6,2,-,-,5,- | -5 | Y |
| RPN calculation Subtraction | -4,-5,- | 1 | Y |
| RPN calculation complex Subtraction | 4,6,2,-,-,5,- | -5 | Y |
| RPN calculation multiplication | -4,-5,\* | 20 | Y |
| RPN calculation complex multiplication | -4,-6,-2,\*,\*,-5,\* | 240 | Y |
| RPN calculation division | -4,-5,/ | 0.8 | Y |
| RPN calculation complex division | -4,-6,-2,/,/,-5,/ | 0.266666 | Y |
| **Inputs with multiple operands** | | | |
| Positive RPN calculation multiple operators | 4,6,2,+,-,5,/ | -0.8 | Y |
| Negative RPN calculation multiple operators | -4,-6,-2,+,-,-5,/ | -0.8 | Y |
| Mixed RPN calculation multiple operators | 4,-6,2,+,-,-5,/ | -1.6 | Y |
| **Invalid input** | | | |
| Input nothing |  | The program will not do anything until you input something valid | Y |
| Input a number with no operators | 1 | That is an invalid input please try again | Y |
| Input a number with one operator | 1,+ | That is an invalid input please try again | Y |
| Input a number with two operators | 1,+,+ | That is an invalid input please try again | Y |
| Input a number with an operator with no comma separating them | 1+ | That is an invalid input please try again | Y |
| Input a letter instead of a number | A,+,2 | That is an invalid input please try again | Y |
| **Infix notation** | | | |
| Input a simple equation | 1,2,+ | (2+1) | Y |
| Input a simple negative equation | -1,-2,+ | (-2+ -1) | Y |
| Input a more complex equation | 4,-6,2,+,-,-5,/ | ((-6+2) – (4))/5 | N |