**Test Plan:**

**Unit Test Plan:**

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| **Test ID** | **Description** | **Precondition** | **Expected IO** | **Expected OP** | **Actual OP** |
| **U1** | To **Add** two integers and display the result on the output screen calculator. | The Calculator program should be compiled successfully without errors. | 135 + 100 | 235(addition of above ten digits will be expressed in exponential form) |  |
| **U2** | To **Subtract** two integers and display the result on the output screen calculator. | The Calculator program should be compiled successfully without errors. | 135 - 100 | 35 |  |
| **U3** | To **Multiply** integers and display the result on the output screen calculator. | The Calculator program should be compiled successfully without errors. | 135 \* 100 | 13500 |  |
| **U4** | To **Divide** integers and display the result on the output screen calculator. | The Calculator program should be compiled successfully without errors. | 135 / 100 | 1.35 |  |
| **U5** | Scientific Operation  Find the **sine** value of an angle provided | The scientific class should be compiled and without errors. | Sin (30) | 0.5 |  |
| **U6** | Scientific Operation  Find the **cosine** value of an angle provided | The scientific class should be compiled and without errors. | Cos (30) | 0.8660 |  |
| **U7** | Scientific Operation  Find the **tangent** value of an angle provided | The scientific class should be compiled and without errors. | Tan (30) | 0.5773 |  |

**Integration Test Plan:**

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| **Test ID** | **Description** | **Precondition** | **Expected IO** | **Expected OP** | **Actual OP** |
| **I1** | Able to compute the given functions and display the output on the screen | Calculator program should be compiled with zero errors. | Inputs are given in the Unit Test file. | Passing Successfully. |  |
| **I2** | Check the calculator class when no parameters are passed. | Calculator program should be compiled with zero errors. | Add (no parameters) | Error: The function add with zero parameters not available. |  |
| **I3** | Passing the function with other parameters like char or string. | Calculator program should be compiled with zero errors. | Sub (char, char) | Error: The function sub with illegal parameters not allowed. |  |
| **I4** | Computation Test on Divide by zero | Calculator program should be compiled with zero errors. | 135/0 | Undefined. |  |
| **I5** | Computation Test for Scientific Calculator | The scientific class should be compiled and without errors | Tan (multiple parameter) | Not allowed. |  |