De La Salle University - Manila

In Partial Fulfillment of the Course
Introduction to Computer Organization and
Architecture 2 (CSARCH2)

IEEE-754 Decimal-32 Floating-Point Converter

Test Cases

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Submitted to:
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Term 2, A.Y. 2023-2024
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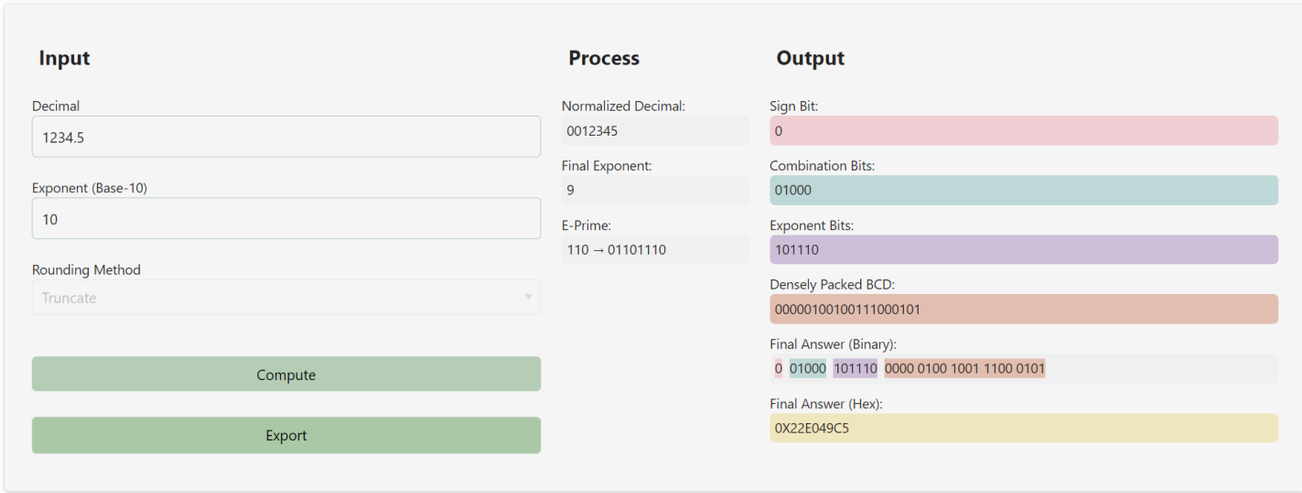
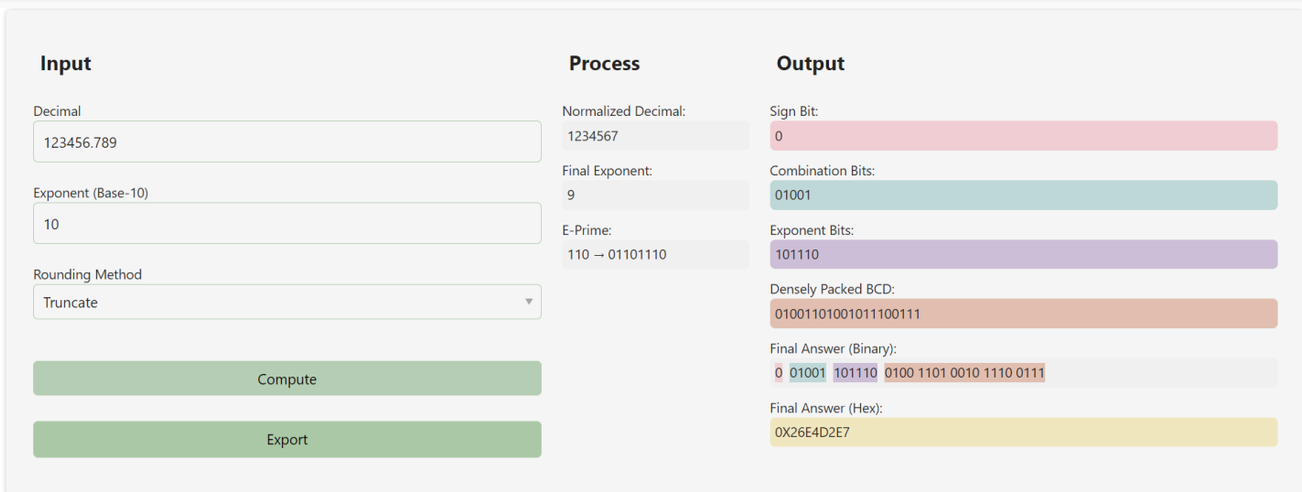
I. Finite Positive Test Cases

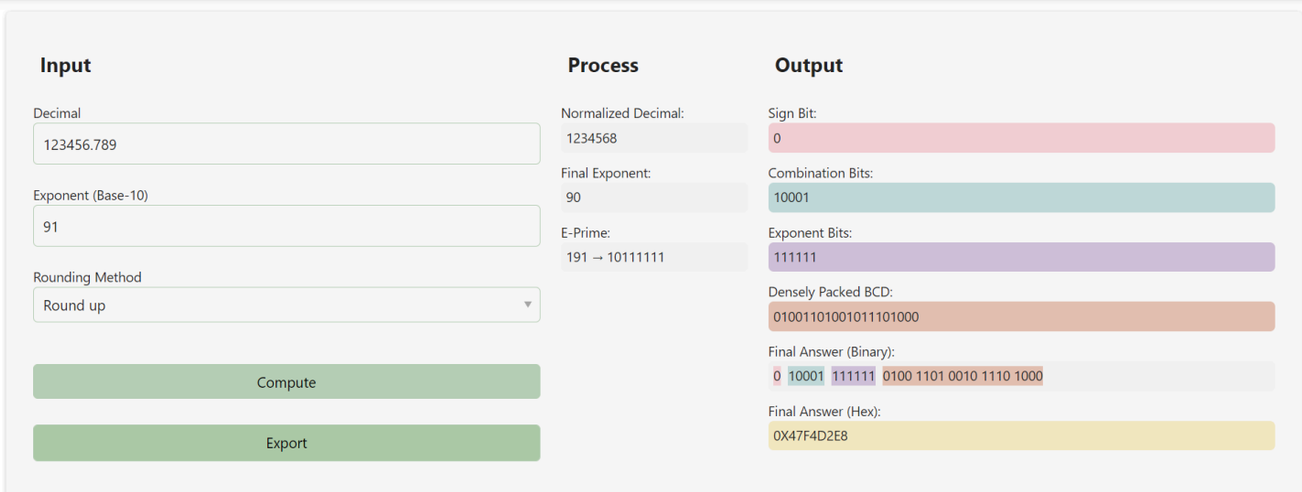
Test Case 1 - With Decimal Point (No Rounding)



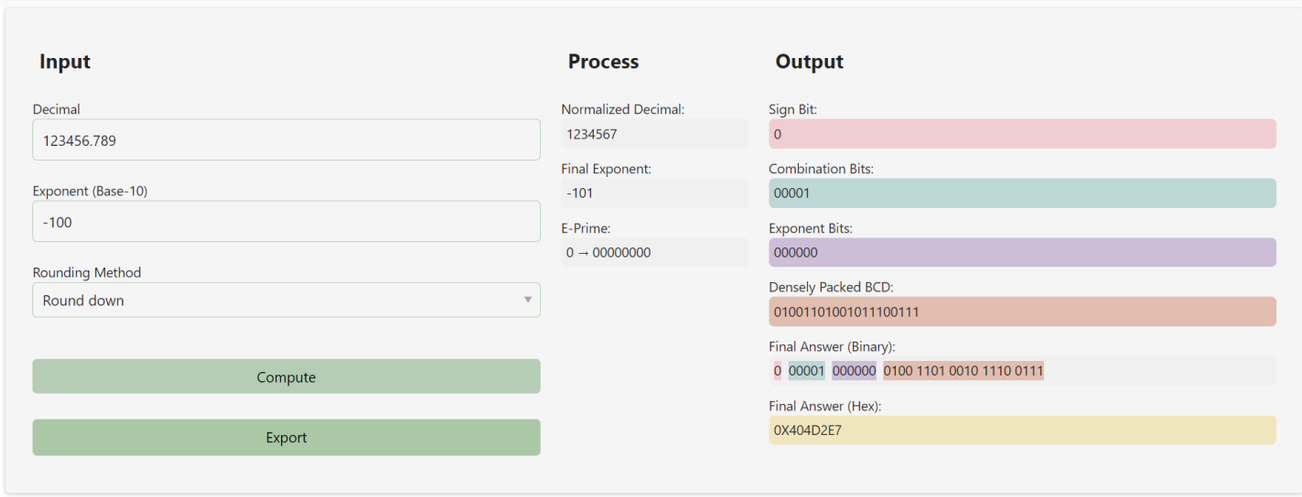
Test Case 2 - With Decimal Point (Truncate)



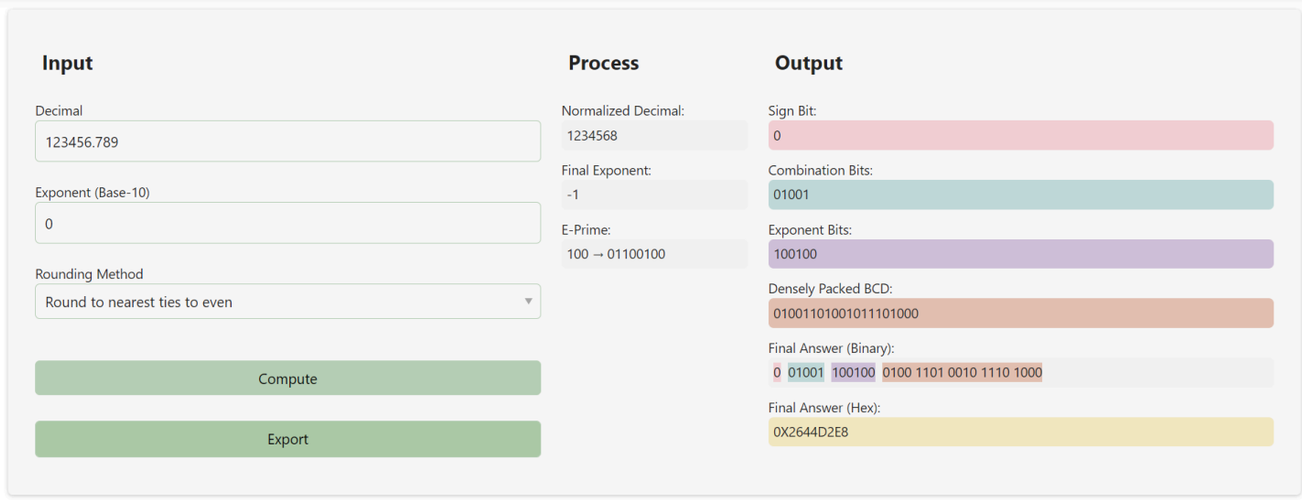
Test Case 3 - With Decimal Point (Round Up)



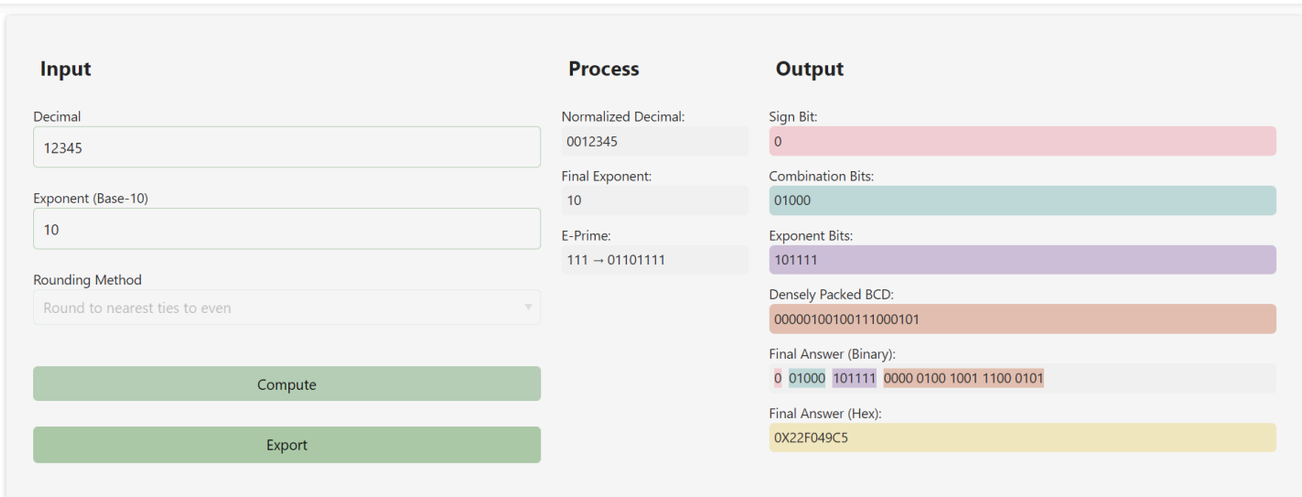
Test Case 4 - With Decimal Point (Round Down)



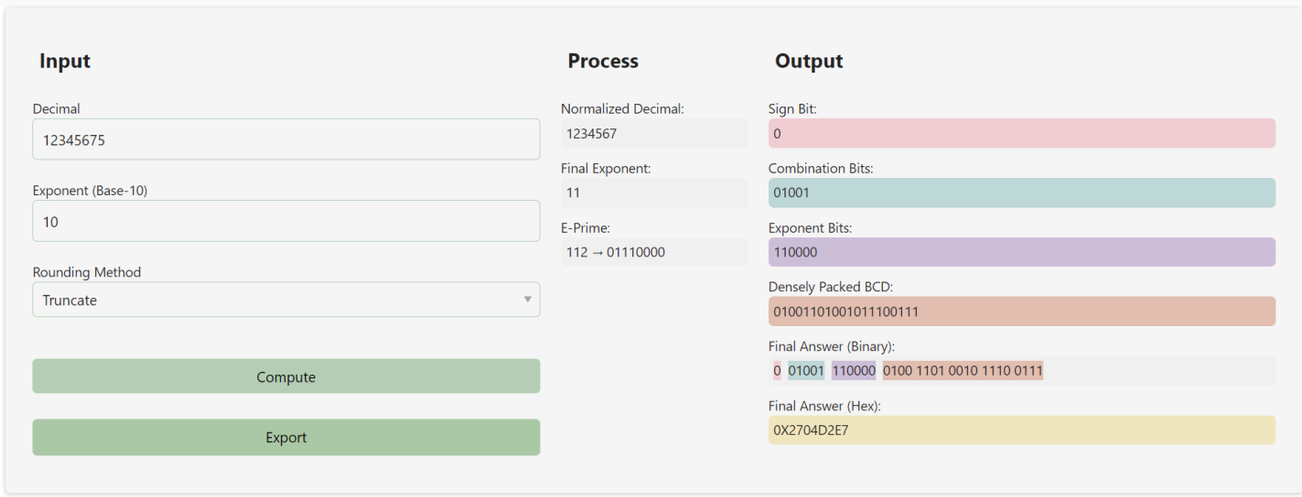
Test Case 5 - With Decimal Point (Round to Nearest Ties to Even)



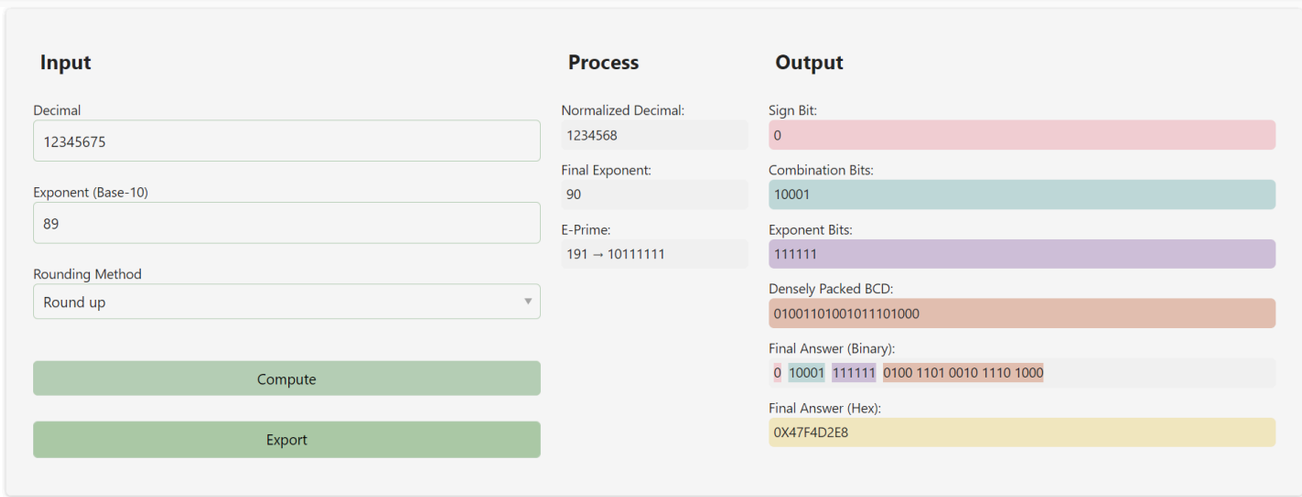
Test Case 6 - Without Decimal Point (No Rounding)



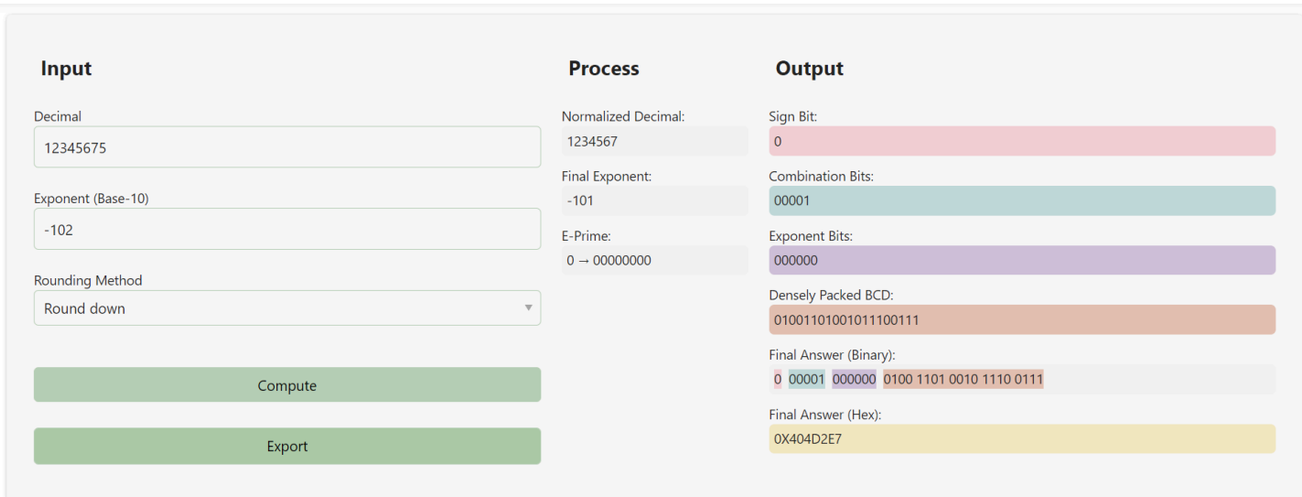
Test Case 7 - Without Decimal Point (Truncate)



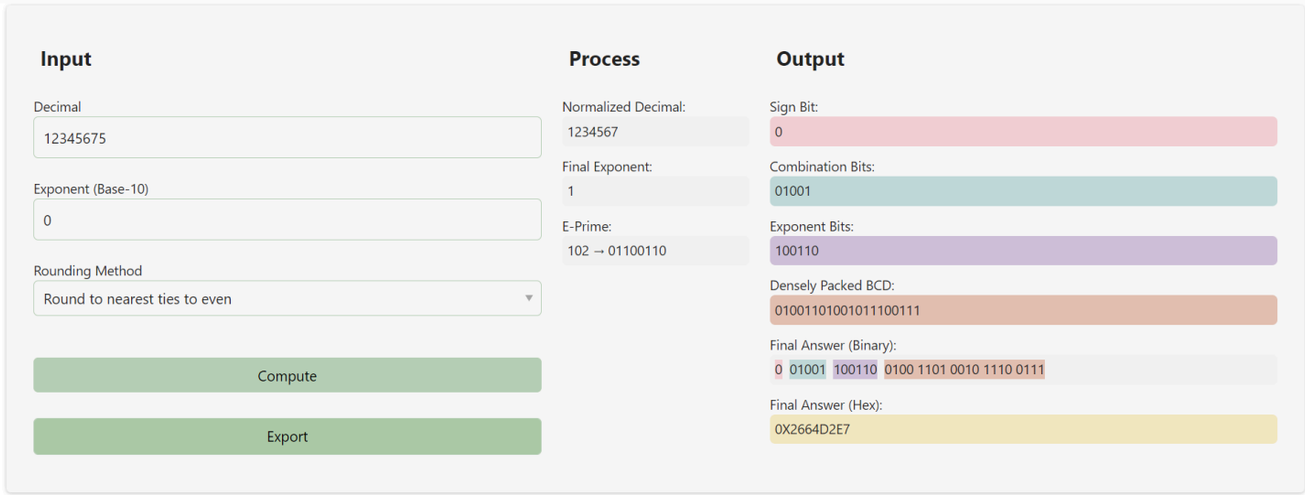
Test Case 8 - Without Decimal Point (Round Up)



Test Case 9 - Without Decimal Point (Round Down)

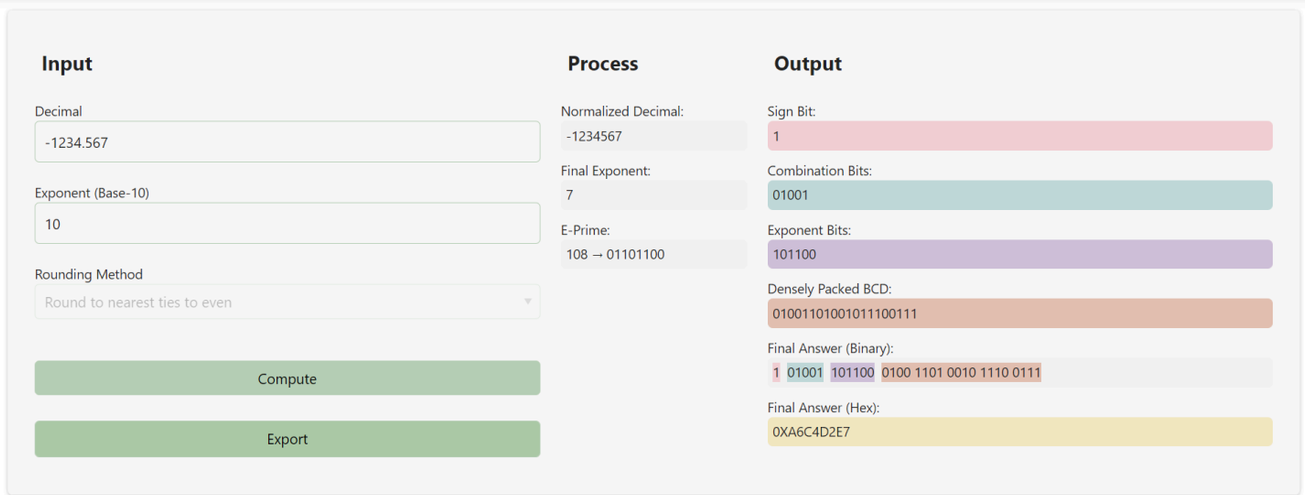


Test Case 10 - Without Decimal Point (Round to Nearest Ties to Even)

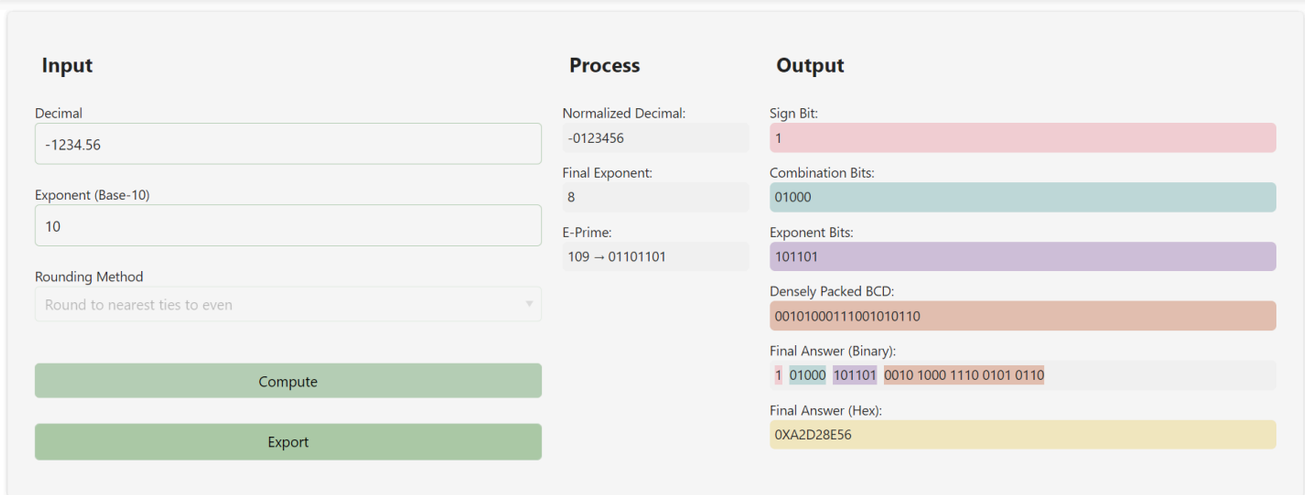


II. Finite Negative Test Cases

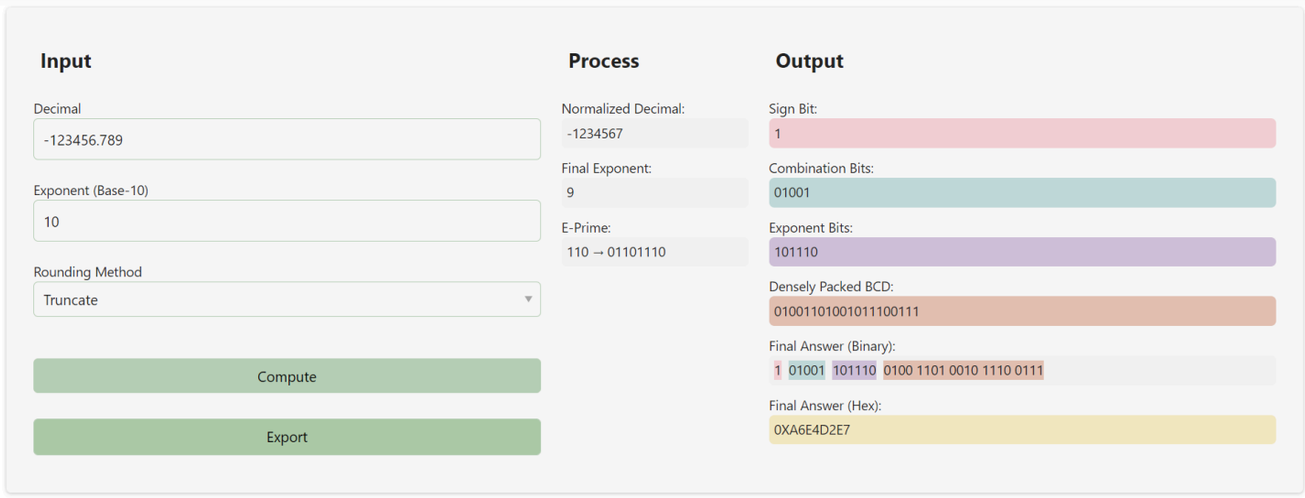
Test Case 11 - With Decimal Point (7 Digits No Rounding)



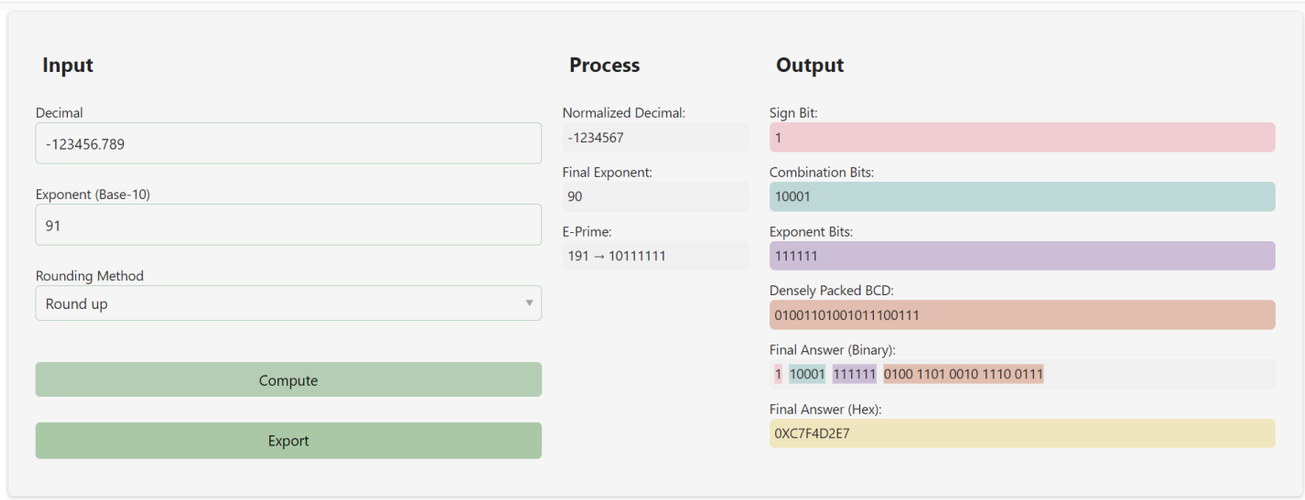
Test Case 12 - With Decimal Point (6 Digits No Rounding)



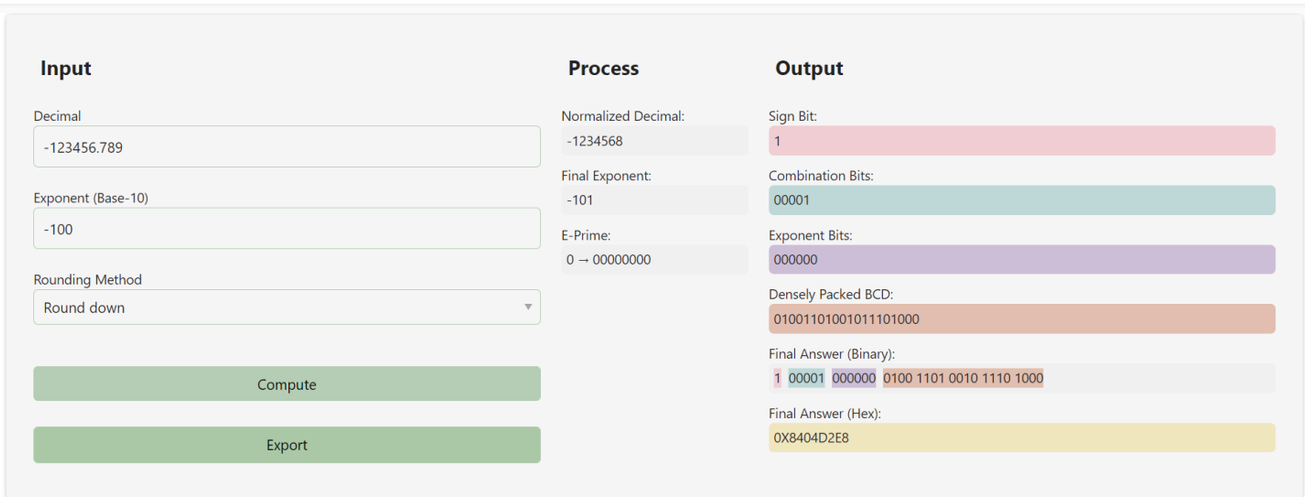
Test Case 13 - With Decimal Point (Truncate)



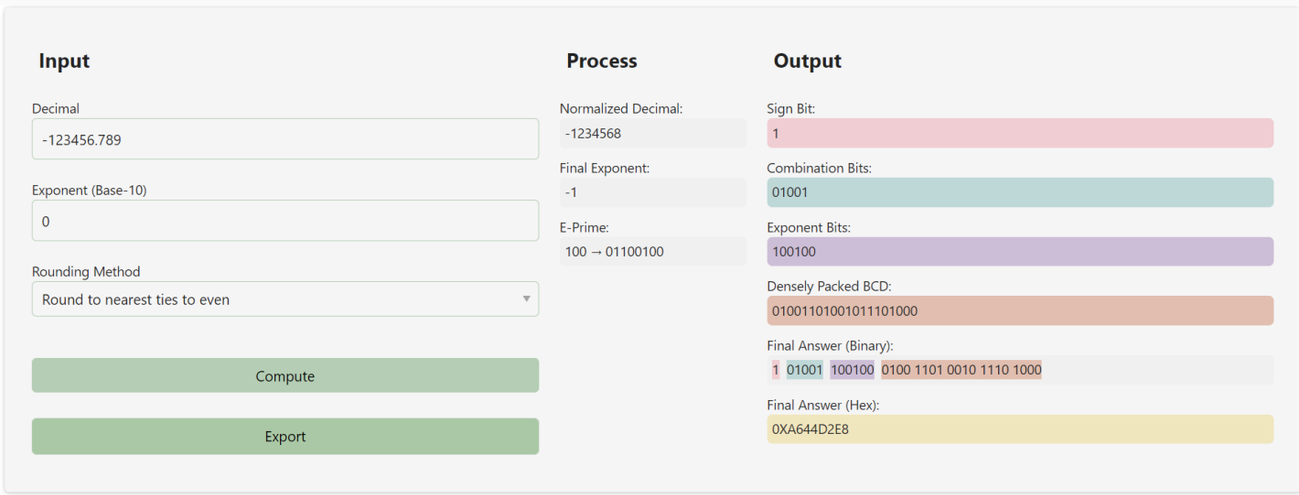
Test Case 14 - With Decimal Point (Round Up)



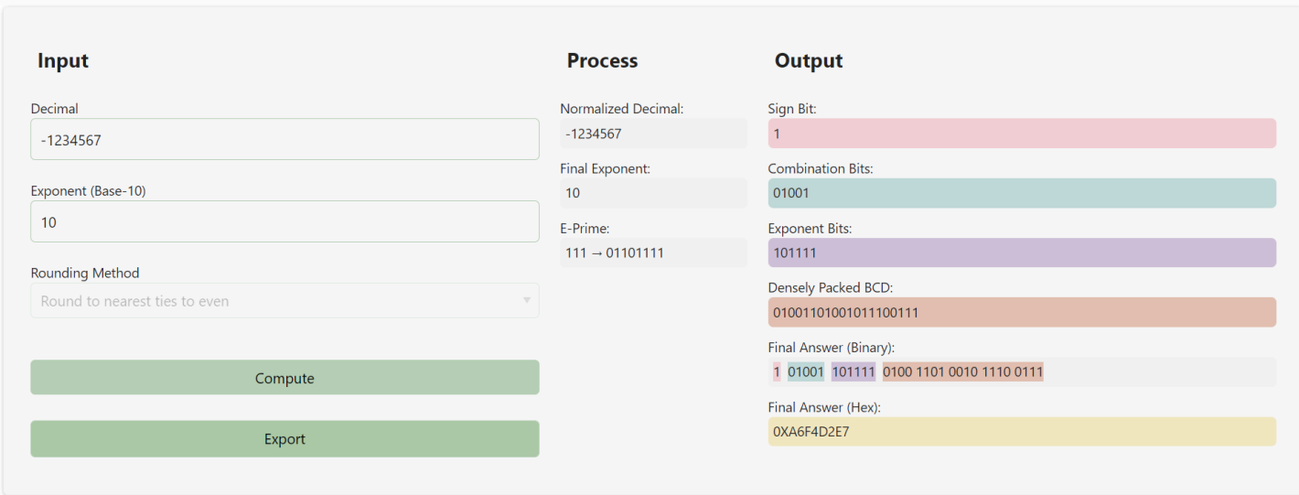
Test Case 15 - With Decimal Point (Round Down)



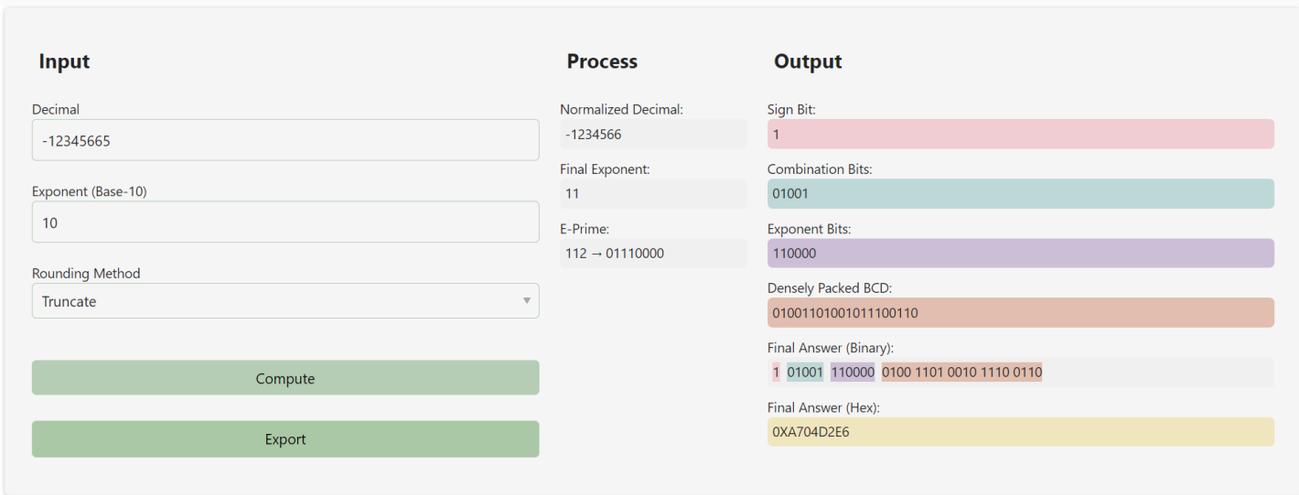
Test Case 16 - With Decimal Point (Round to Nearest Ties to Even)



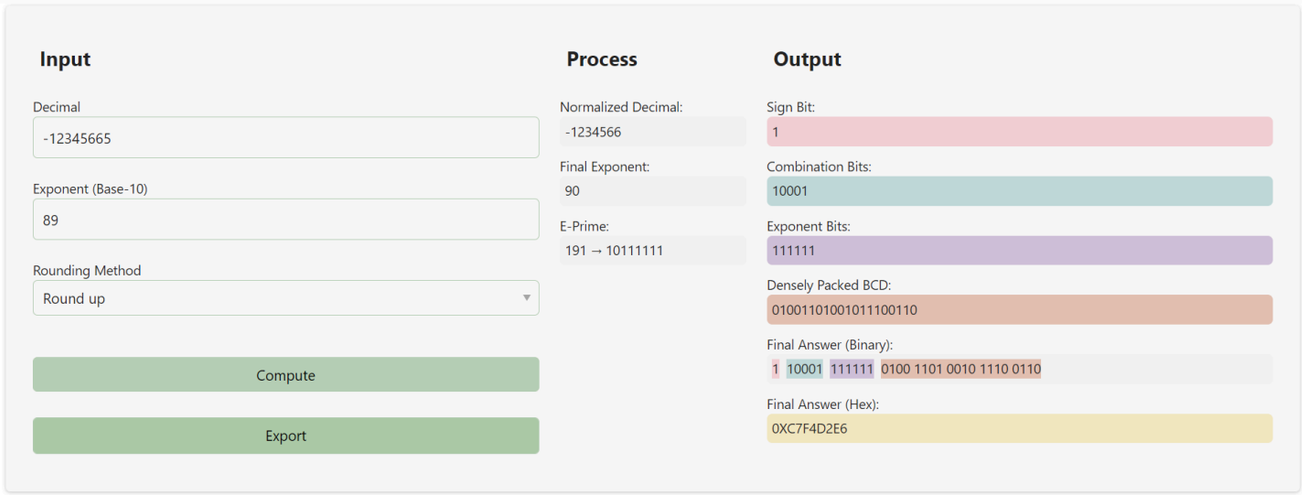
Test Case 17 - Without Decimal Point (No Rounding)



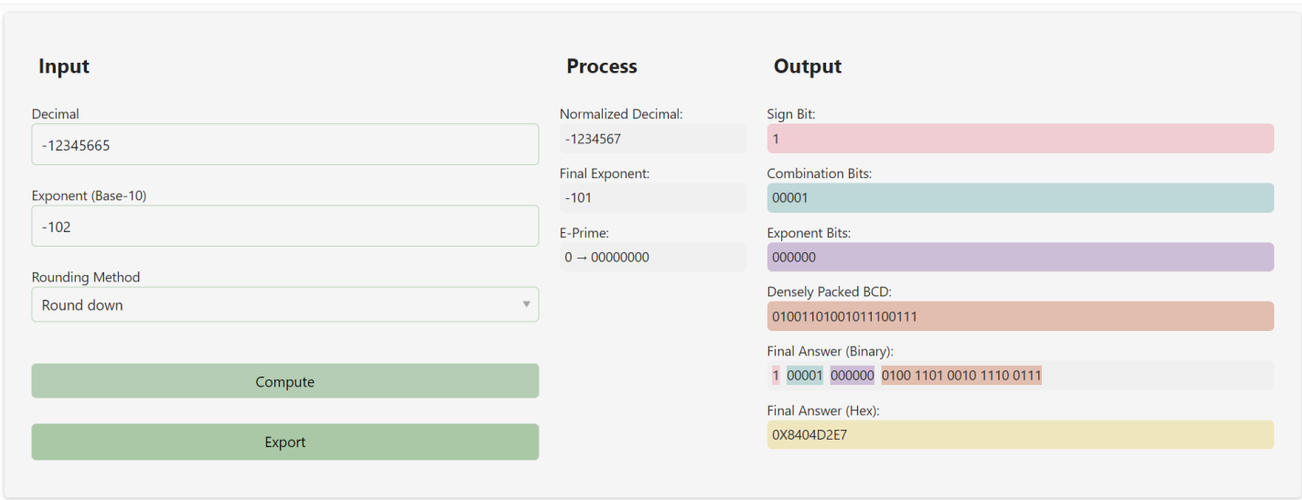
Test Case 18 - Without Decimal Point (Truncate)



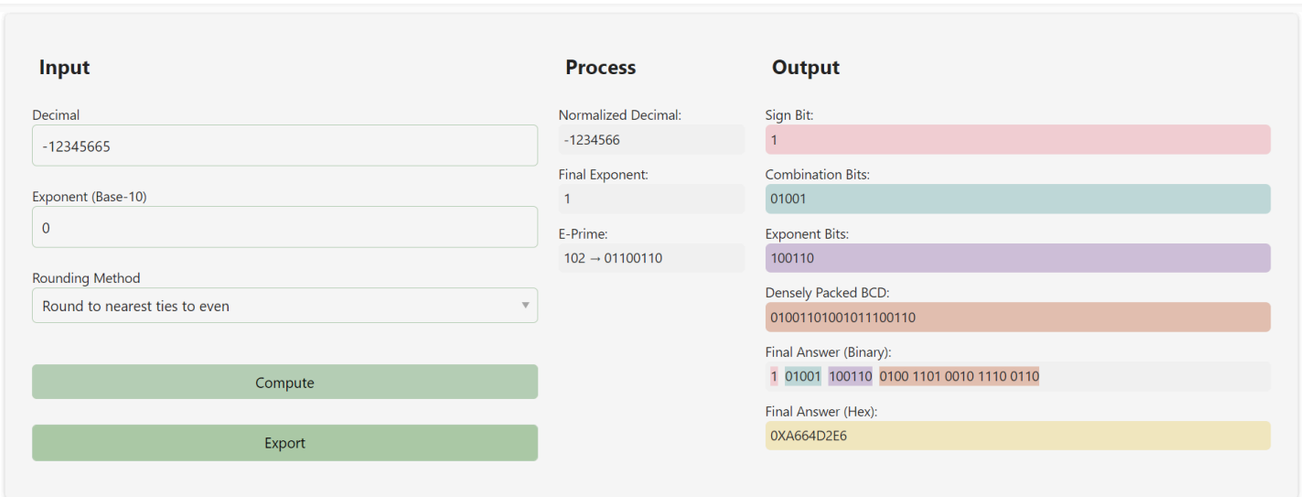
Test Case 19 - Without Decimal Point (Round-Up)



Test Case 20 - Without Decimal Point (Round Down)

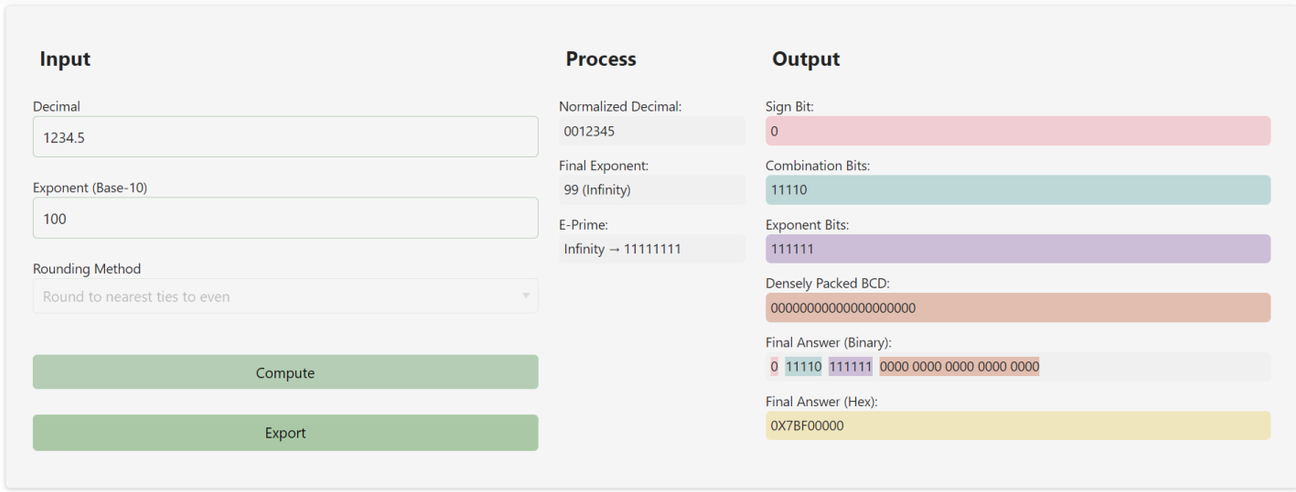


Test Case 21 - Without Decimal Point (Round to Nearest Ties to Even)

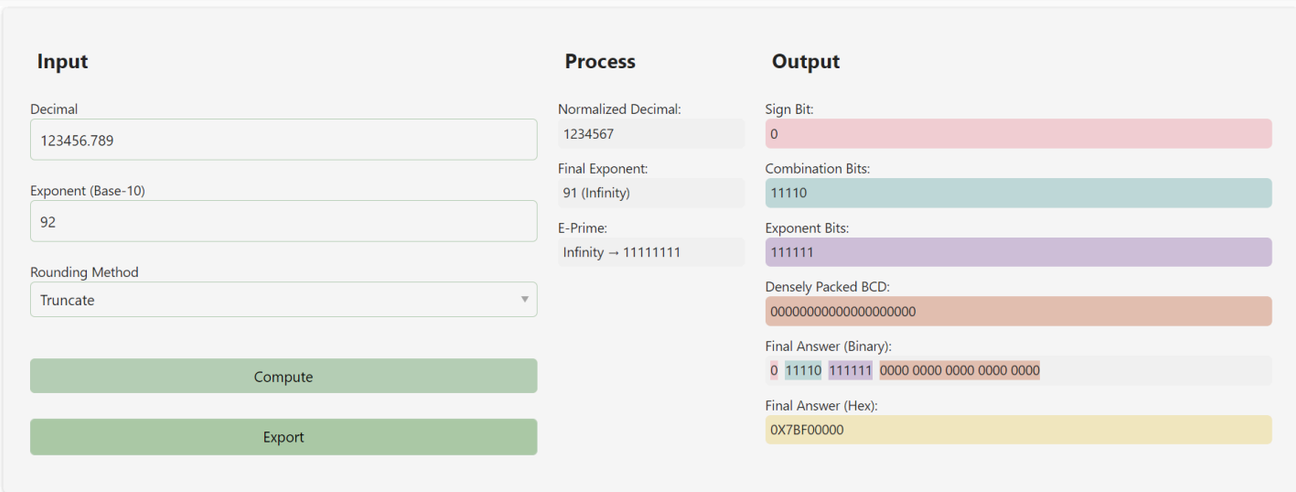


III. Infinity Positive Test Cases

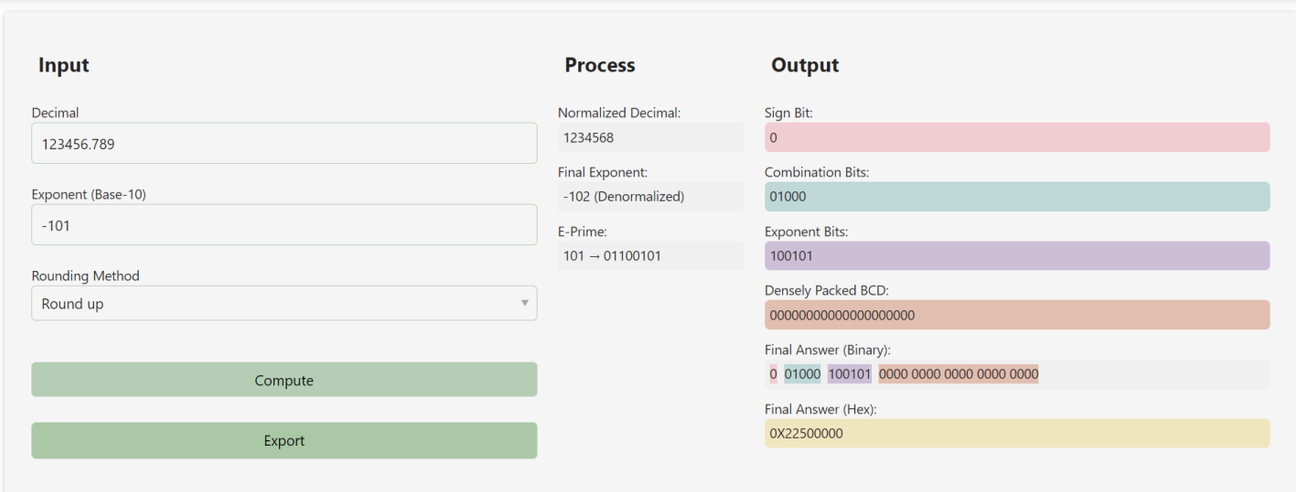
Test Case 22 - With Decimal Point (No Rounding)



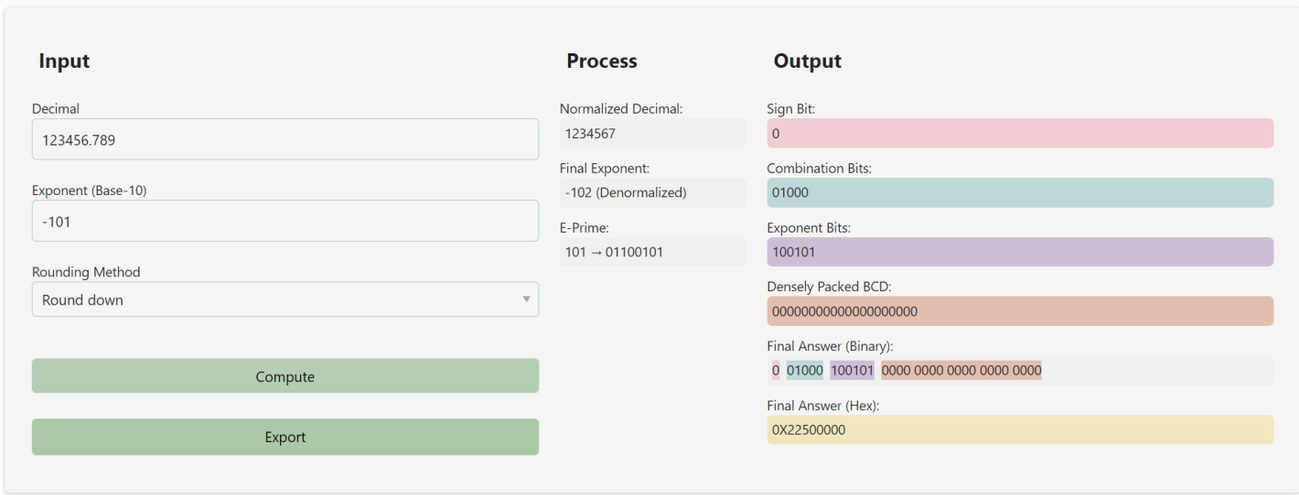
Test Case 23 - With Decimal Point (Truncate)



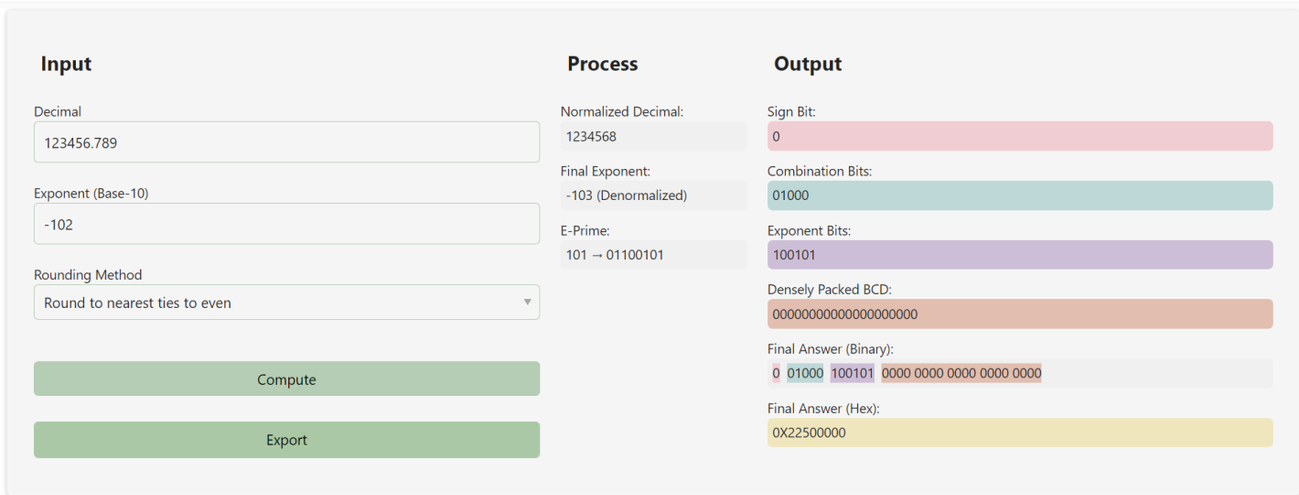
Test Case 24 - With Decimal Point (Round-Up)



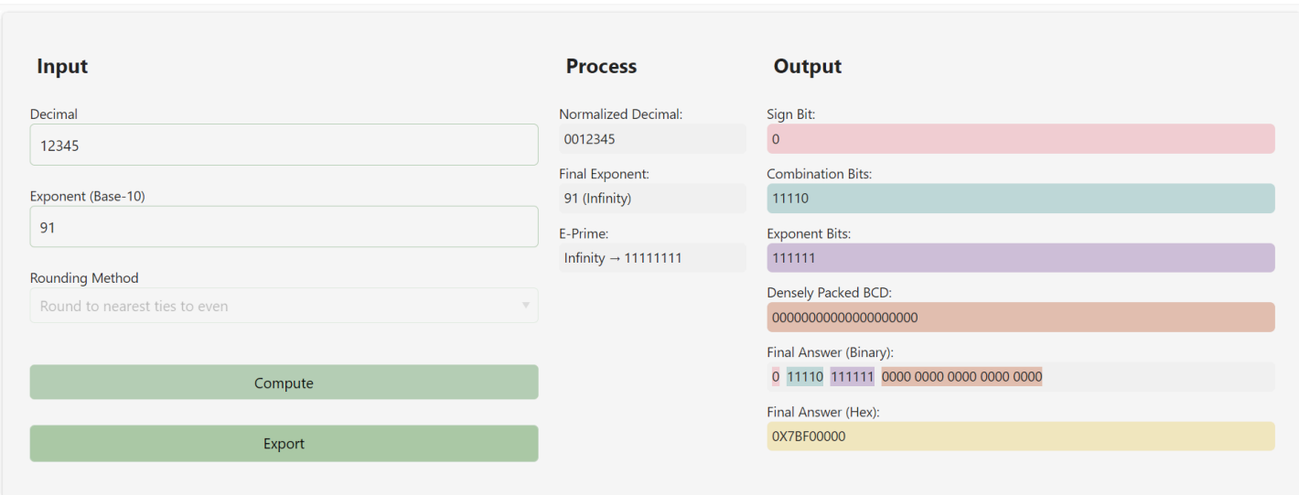
Test Case 25 - With Decimal Point (Round Down)



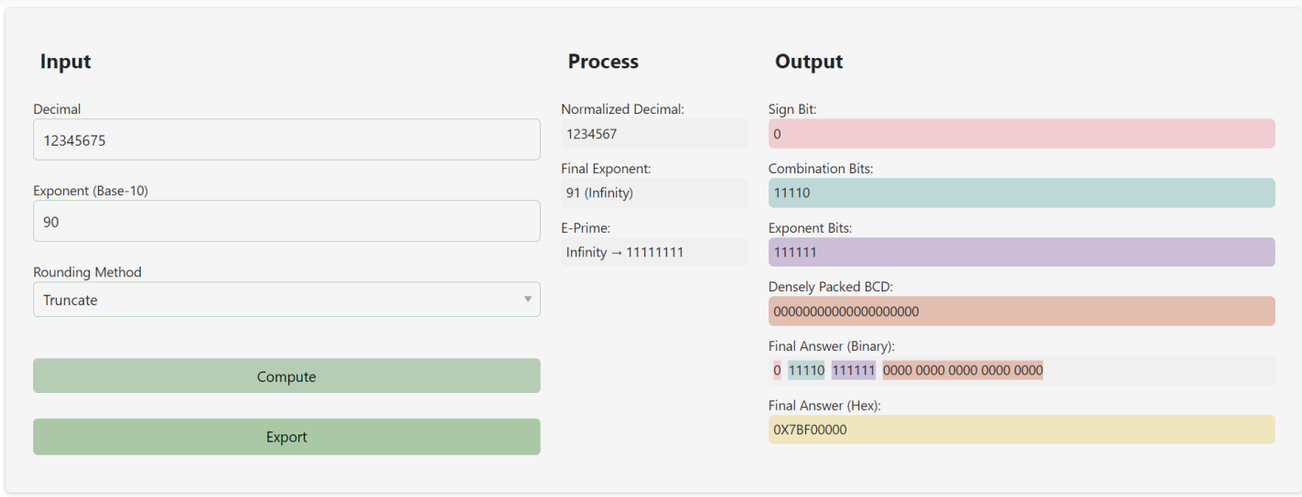
Test Case 26 - With Decimal Point (Round to Nearest Ties to Even)



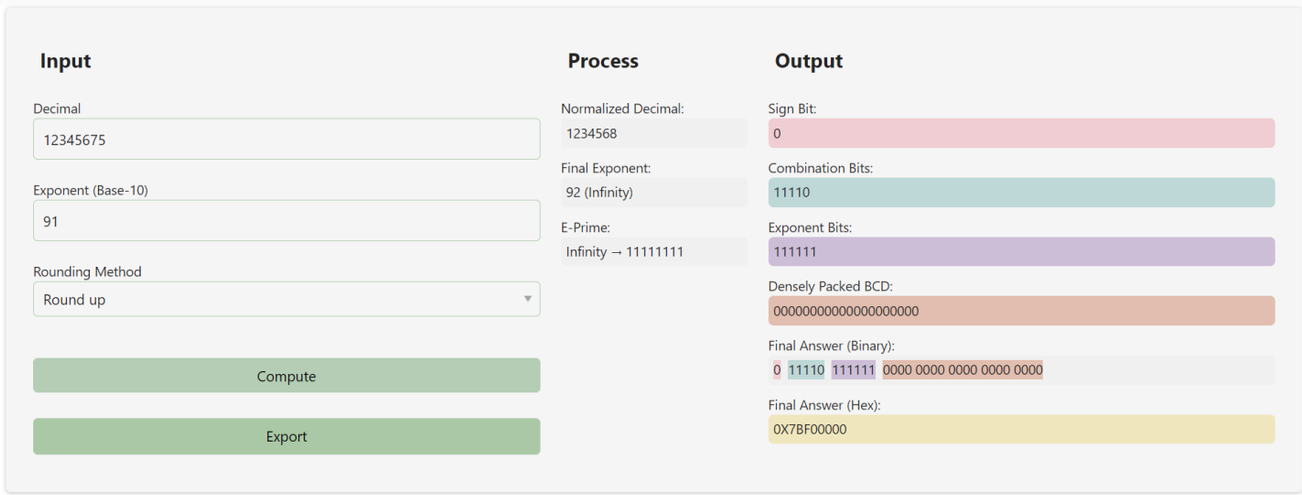
Test Case 27 - Without Decimal Point (No Rounding)



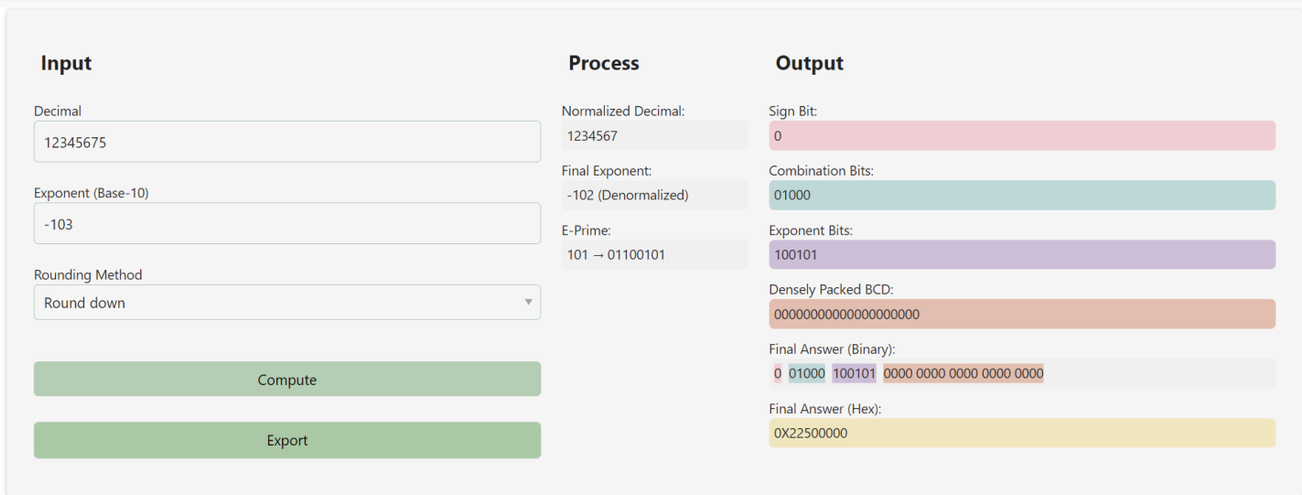
Test Case 28 - Without Decimal Point (Truncate)



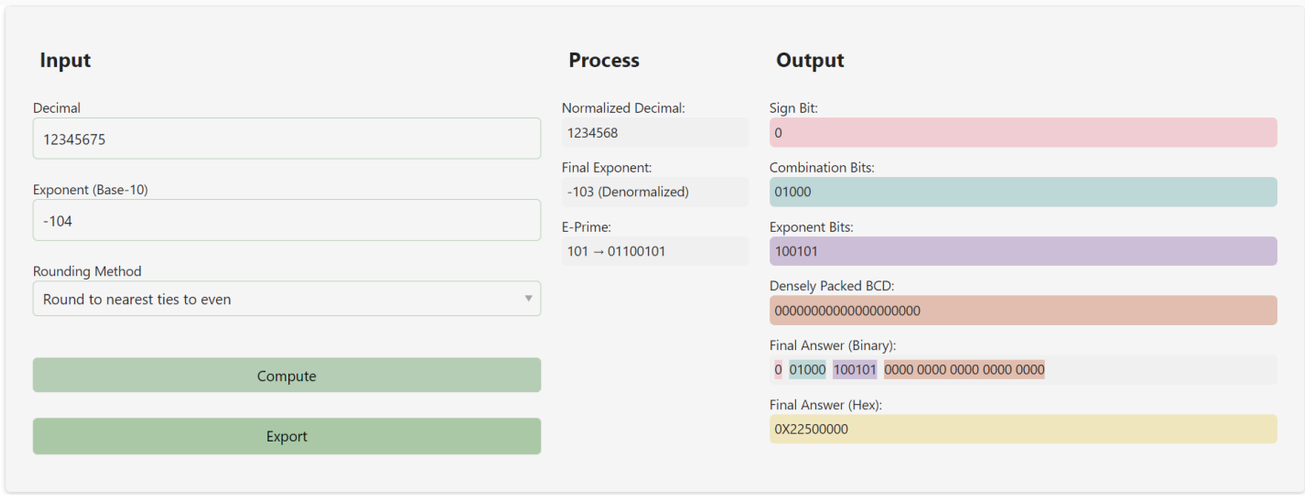
Test Case 29 - Without Decimal Point (Round Up)



Test Case 30 - Without Decimal Point (Round Down)

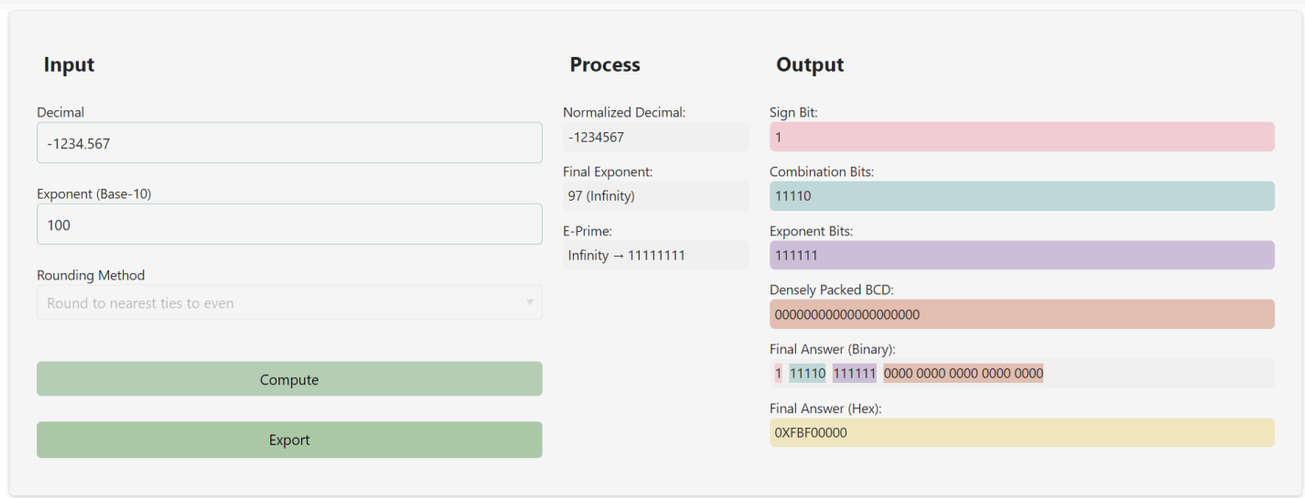


Test Case 31 - Without Decimal Point (Round to Nearest Ties to Even)

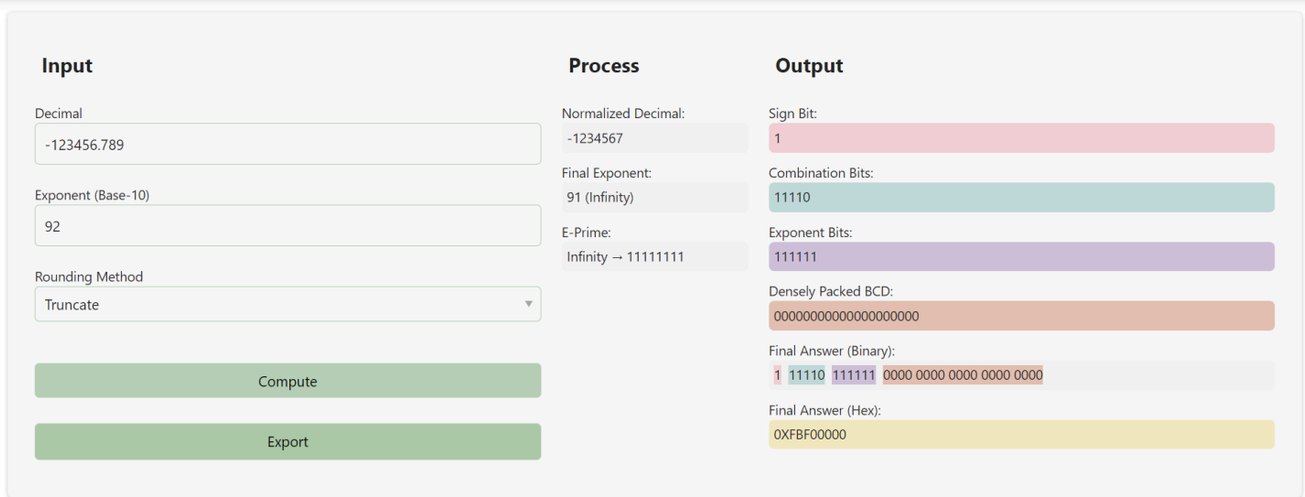


IV. Infinity Negative Test Cases

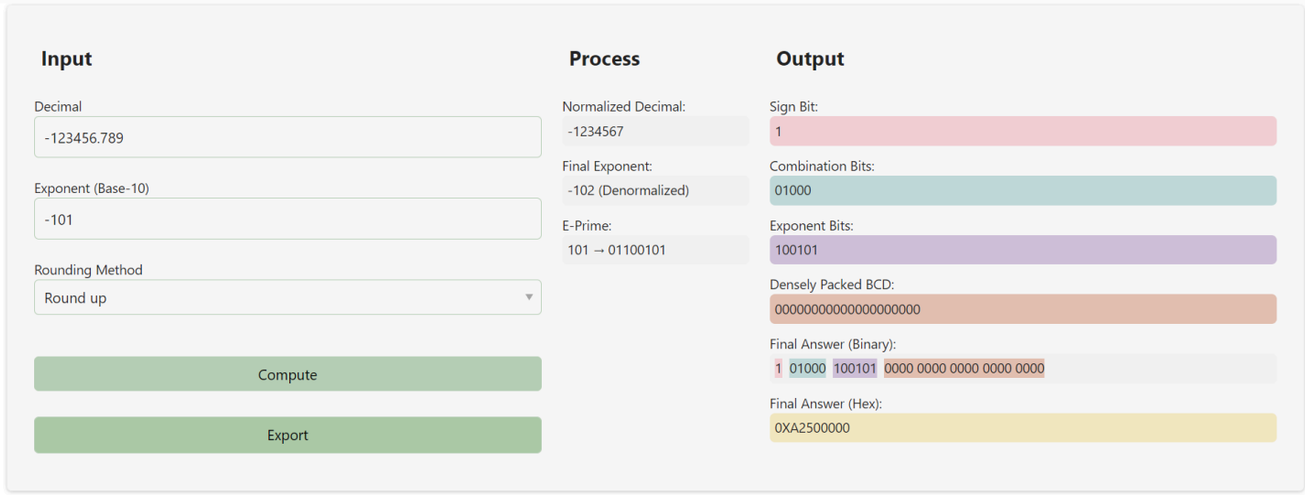
Test Case 32 - With Decimal Point (No Rounding)



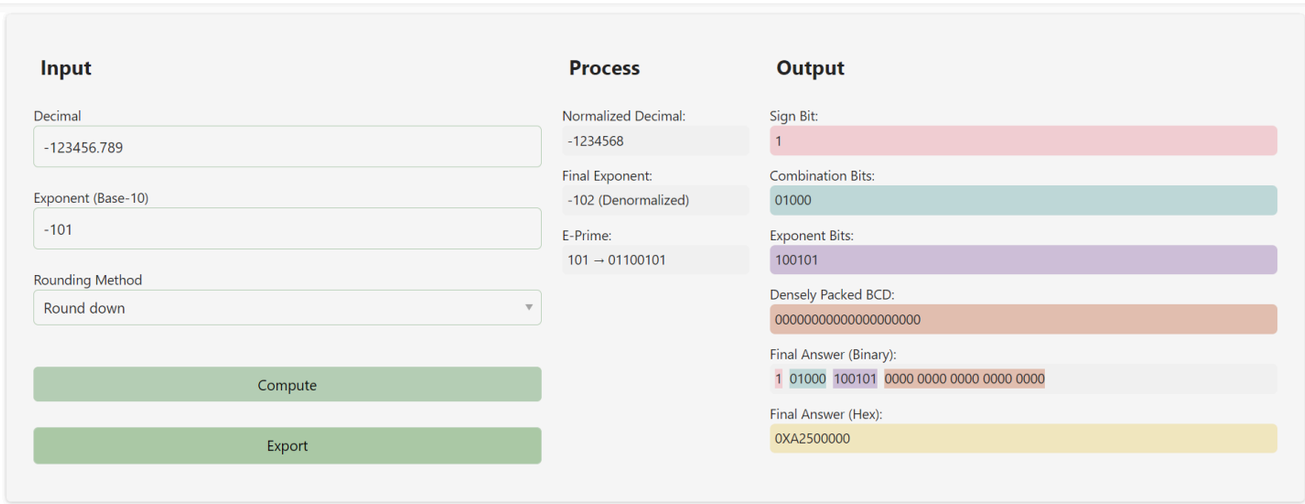
Test Case 33 - With Decimal Point (Truncate)



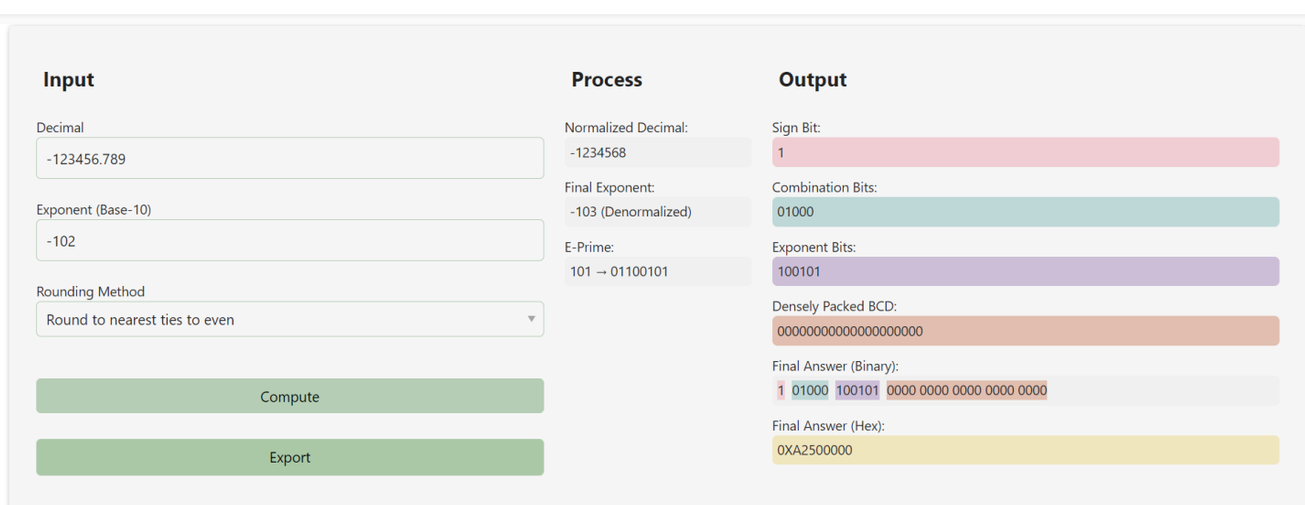
Test Case 34 - With Decimal Point (Round-Up)



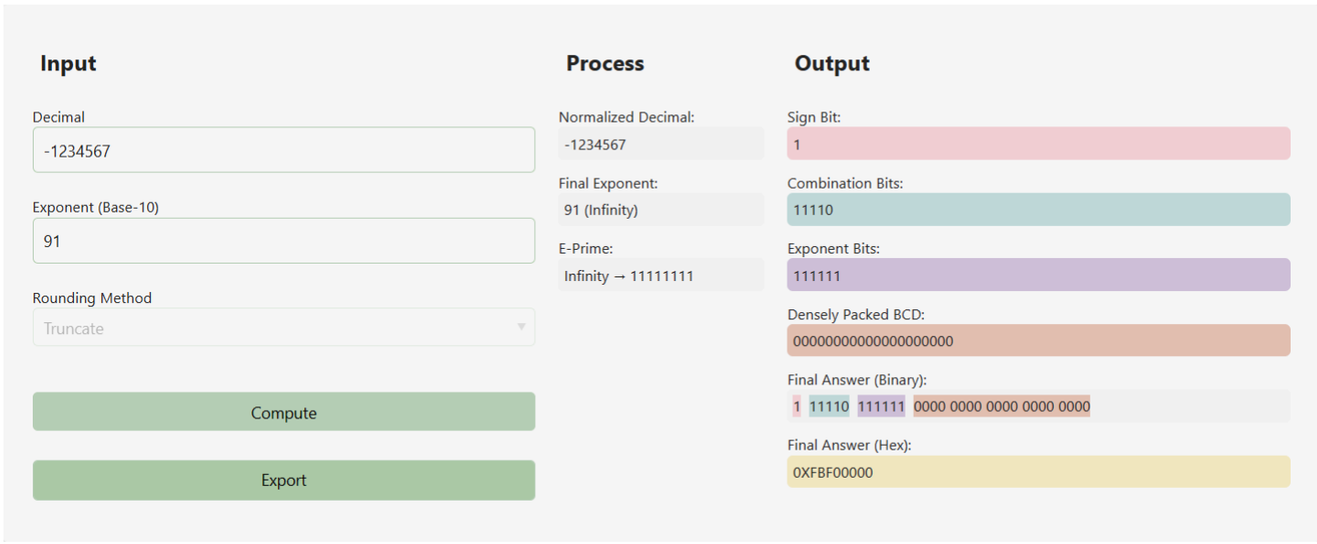
Test Case 35 - With Decimal Point (Round Down)



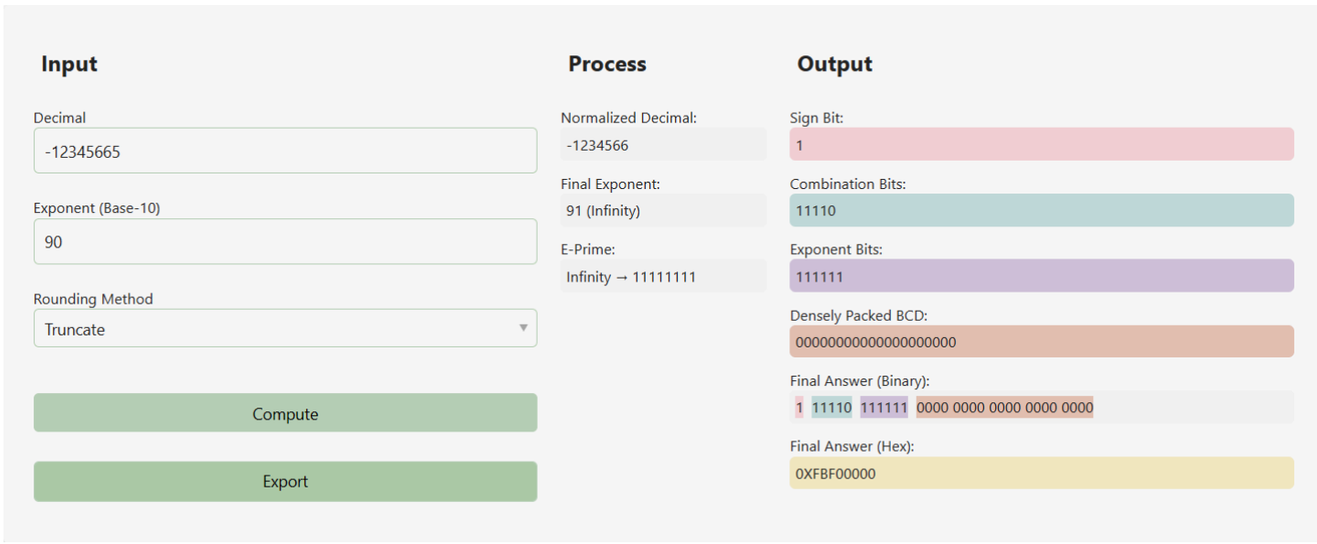
Test Case 36 - With Decimal Point (Round to Nearest Ties to Even)



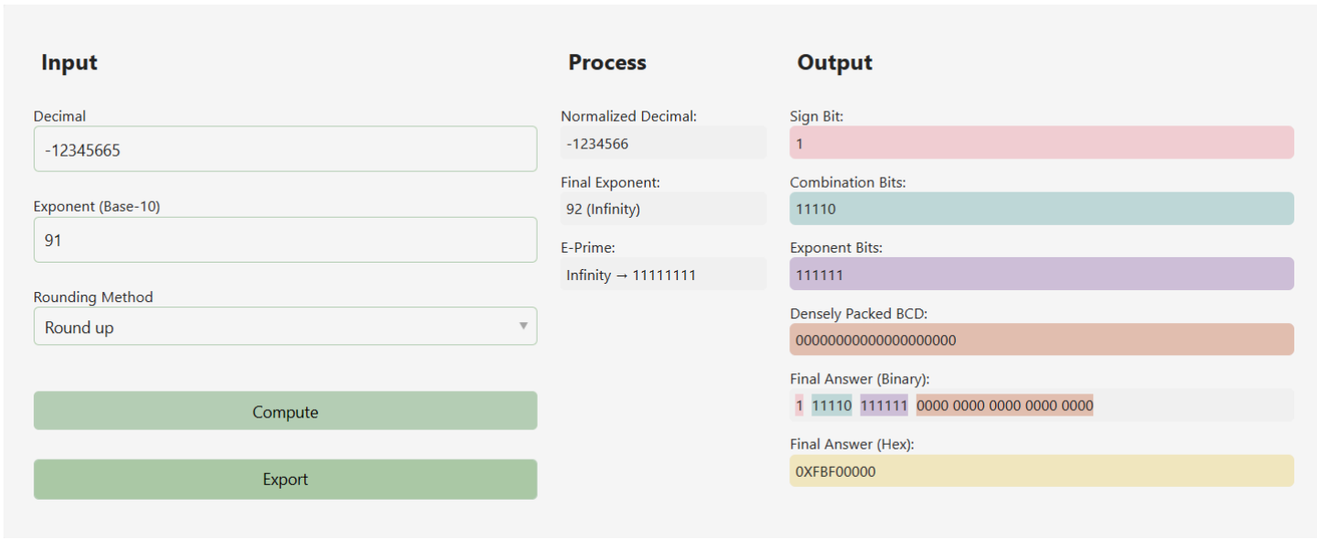
Test Case 37 - Without Decimal Point (No Rounding)



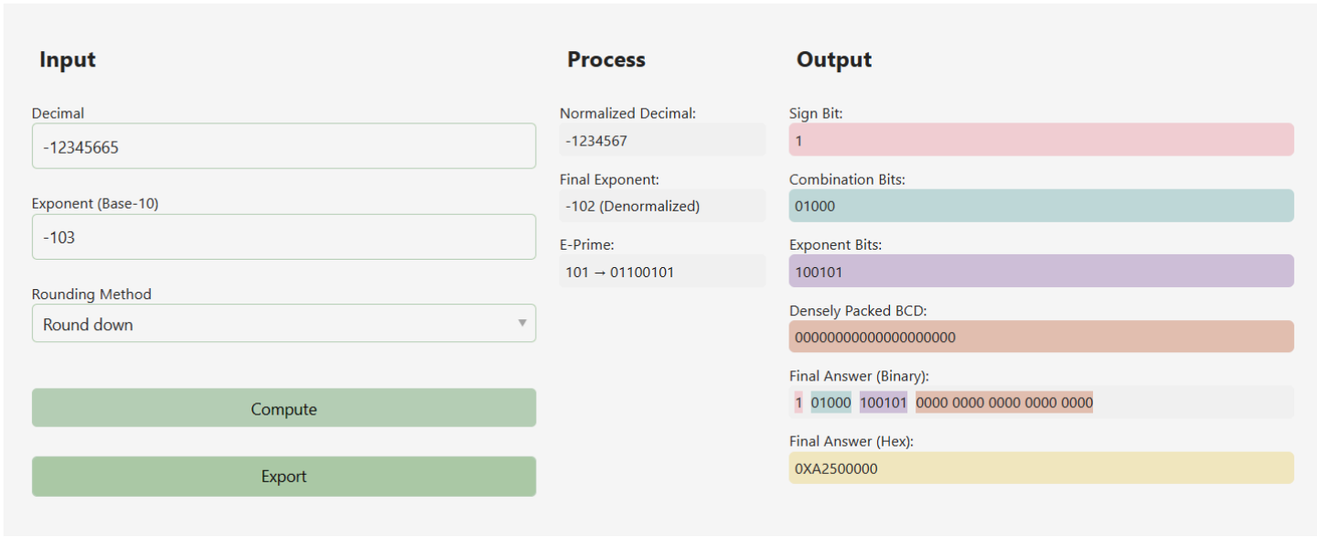
Test Case 38 - Without Decimal Point (Truncate)



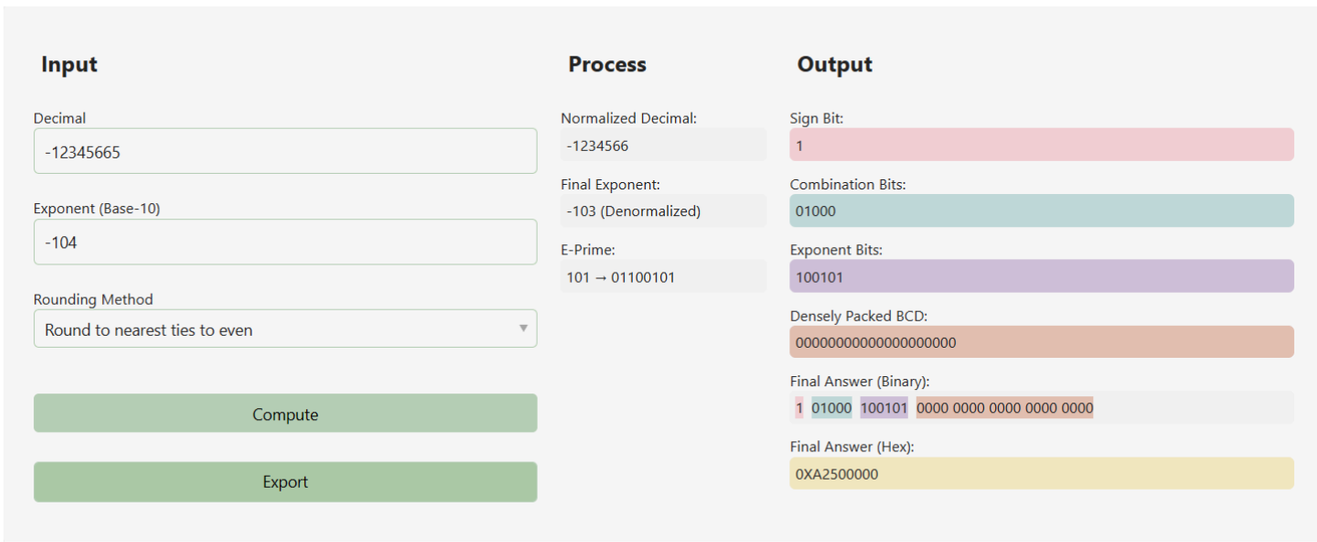
Test Case 39 - Without Decimal Point (Round Up)



Test Case 40 - Without Decimal Point (Round Down)

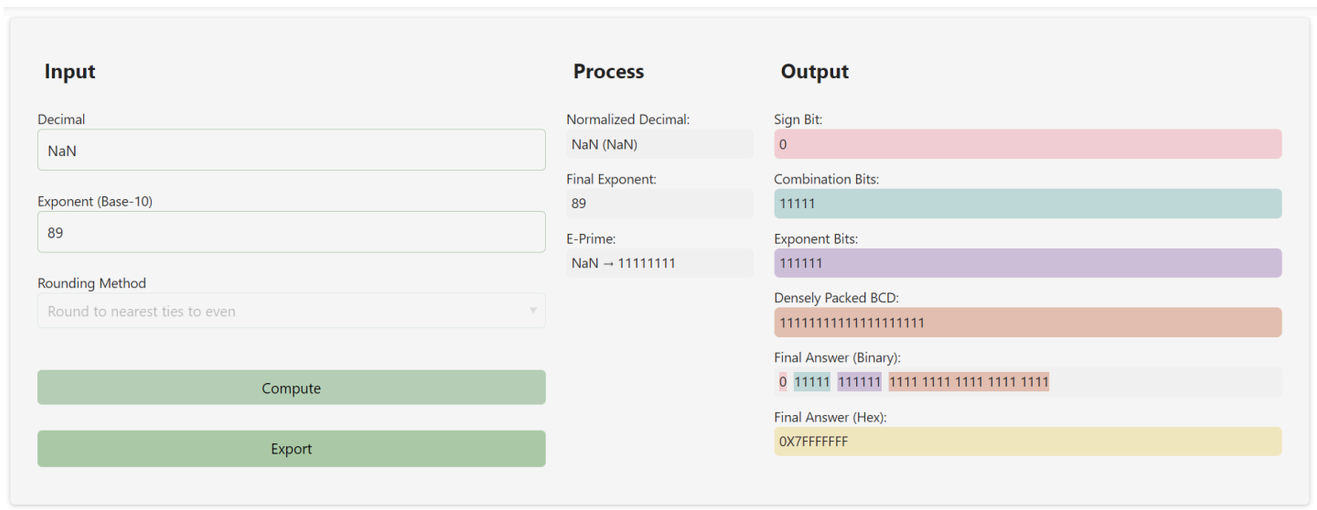


Test Case 41 - Without Decimal Point (Round to Nearest Ties to Even)

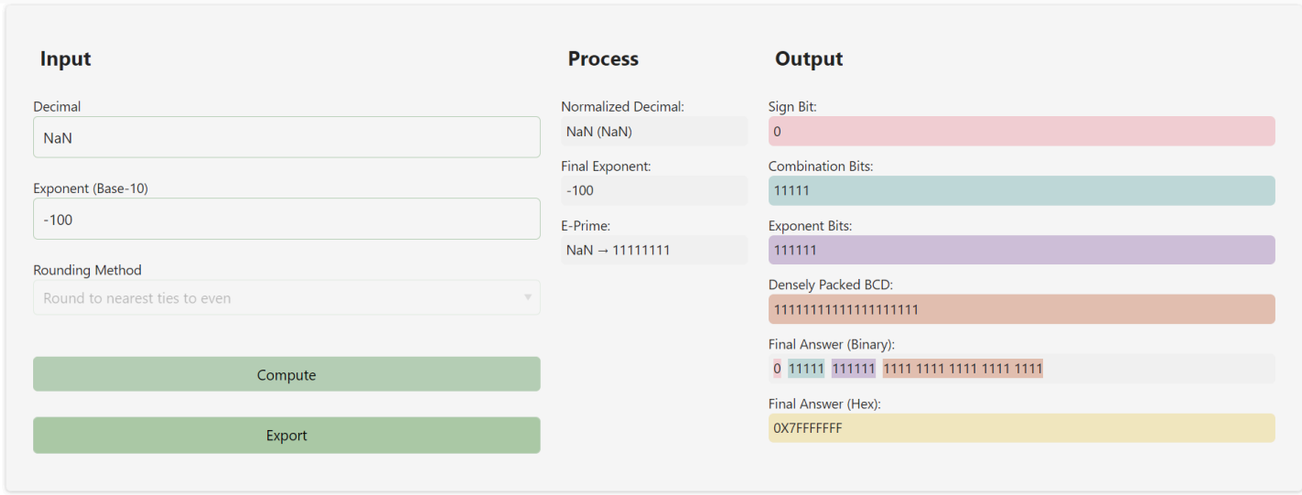


V. NaN Test Cases

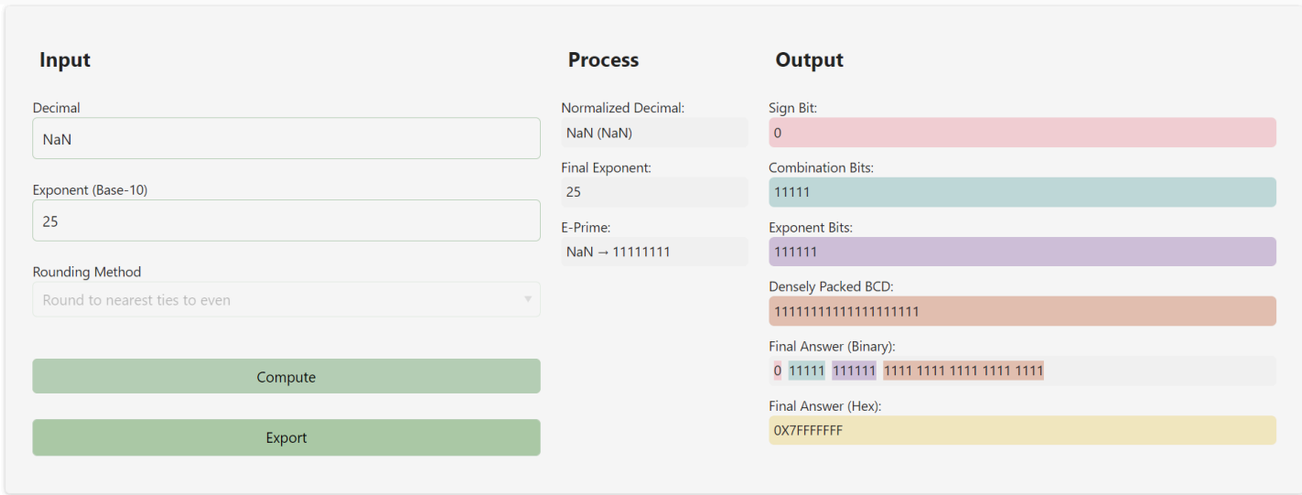
Test Case 42 - NaN (with Exponent)



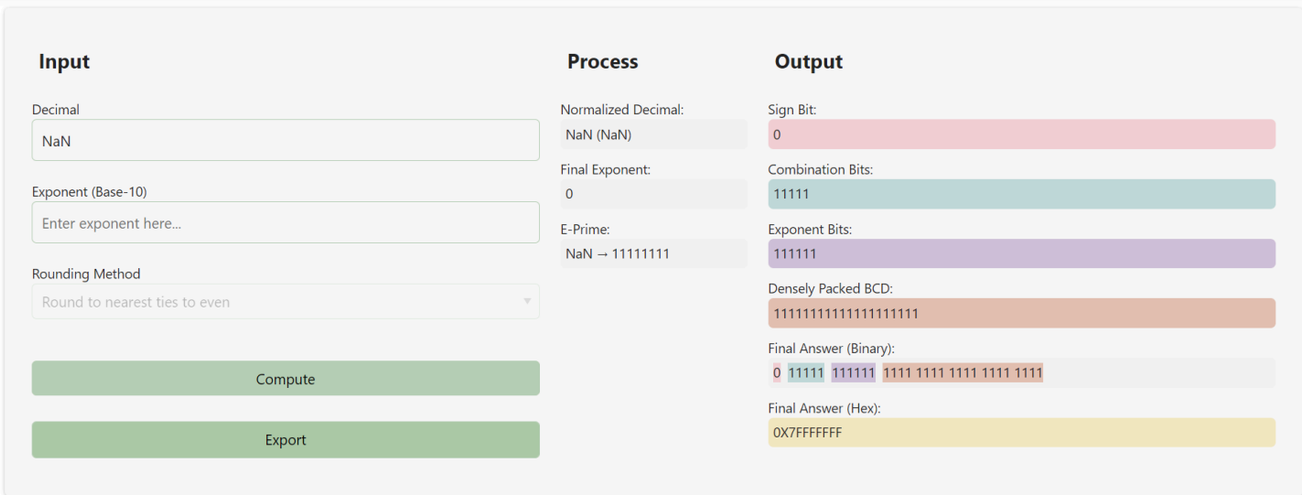
Test Case 43 - Division by Zero (with Exponent)



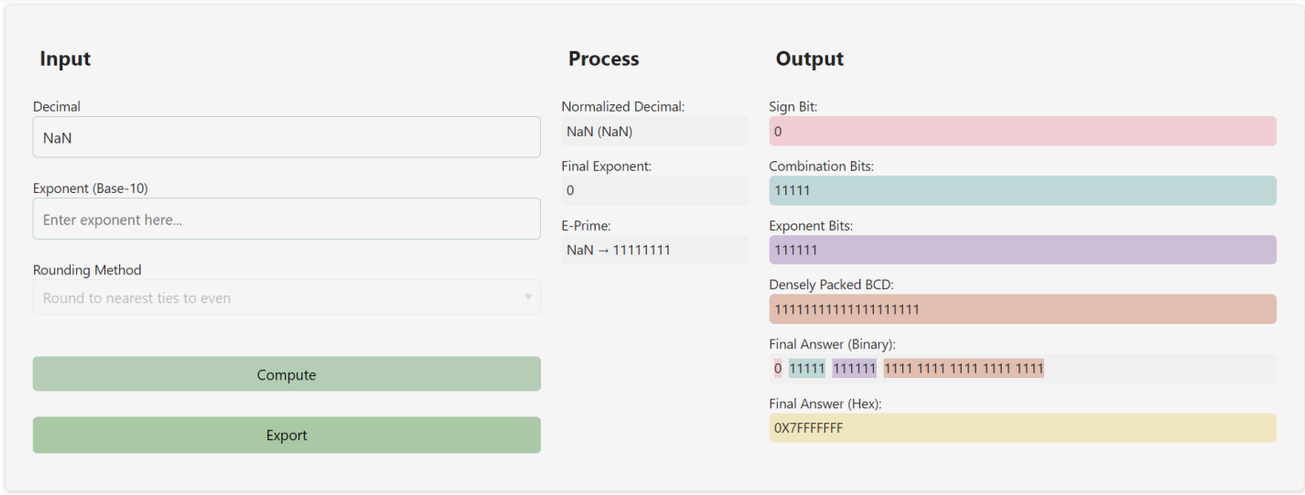
Test Case 44 - Square Root of a Negative Number (with Exponent)



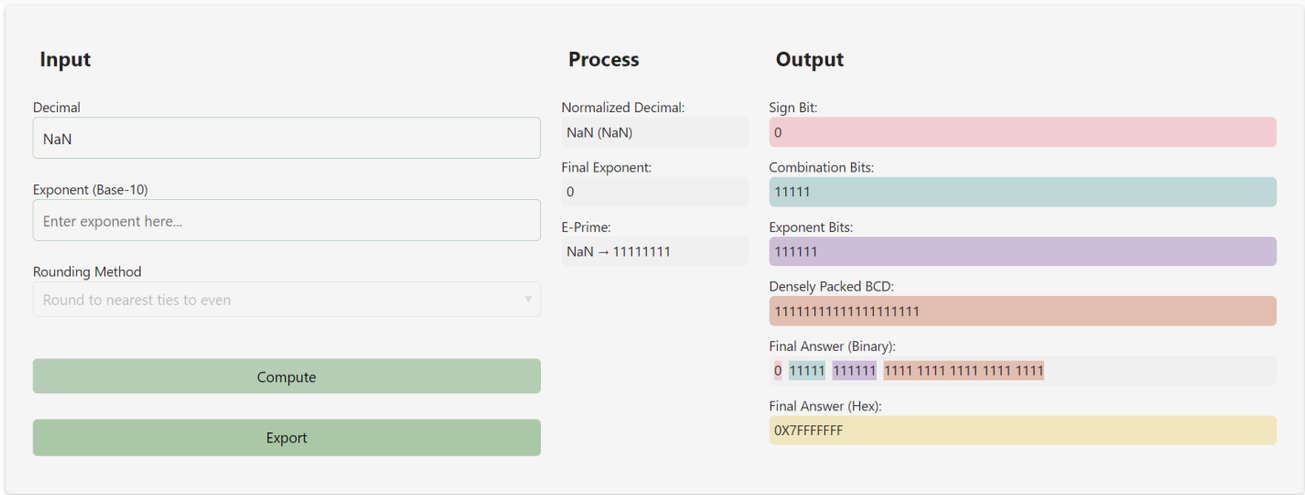
Test Case 45 - NaN (without Exponent)



Test Case 46 - Division by Zero (without Exponent)

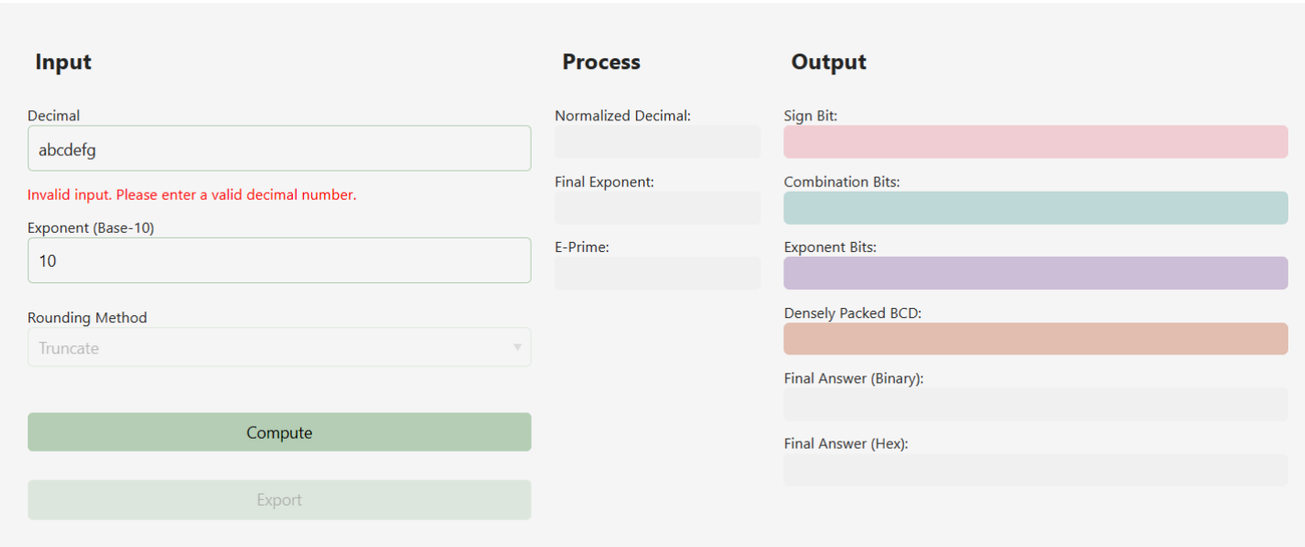


Test Case 47 - Square Root of a Negative Number (without Exponent)

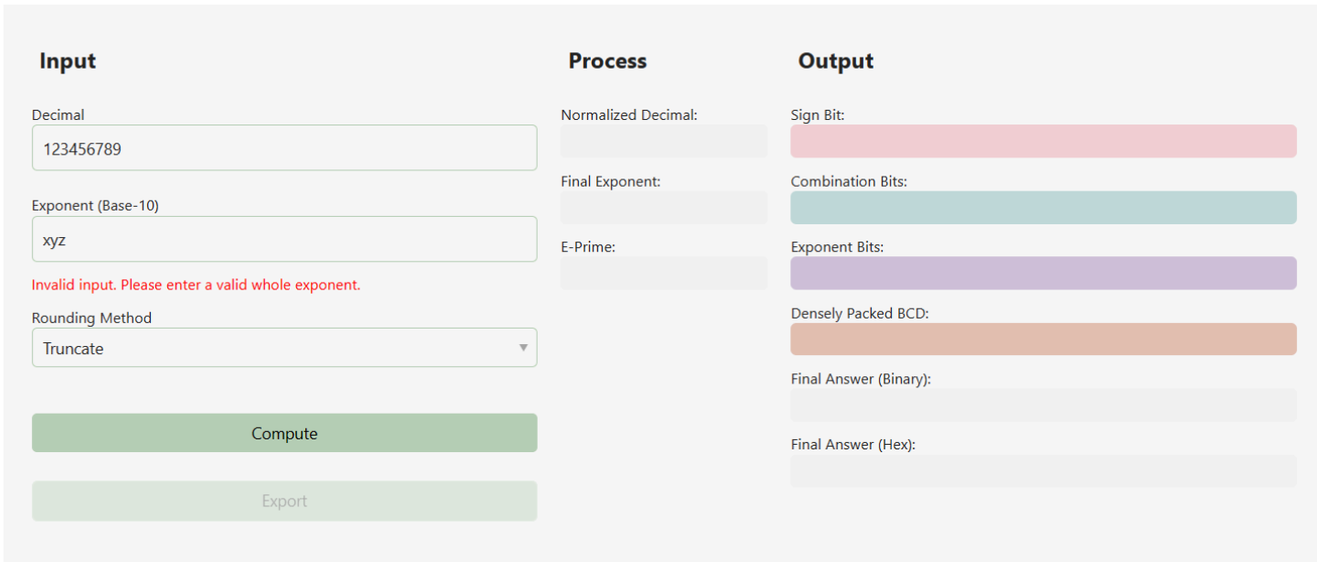


VI. Invalid Inputs

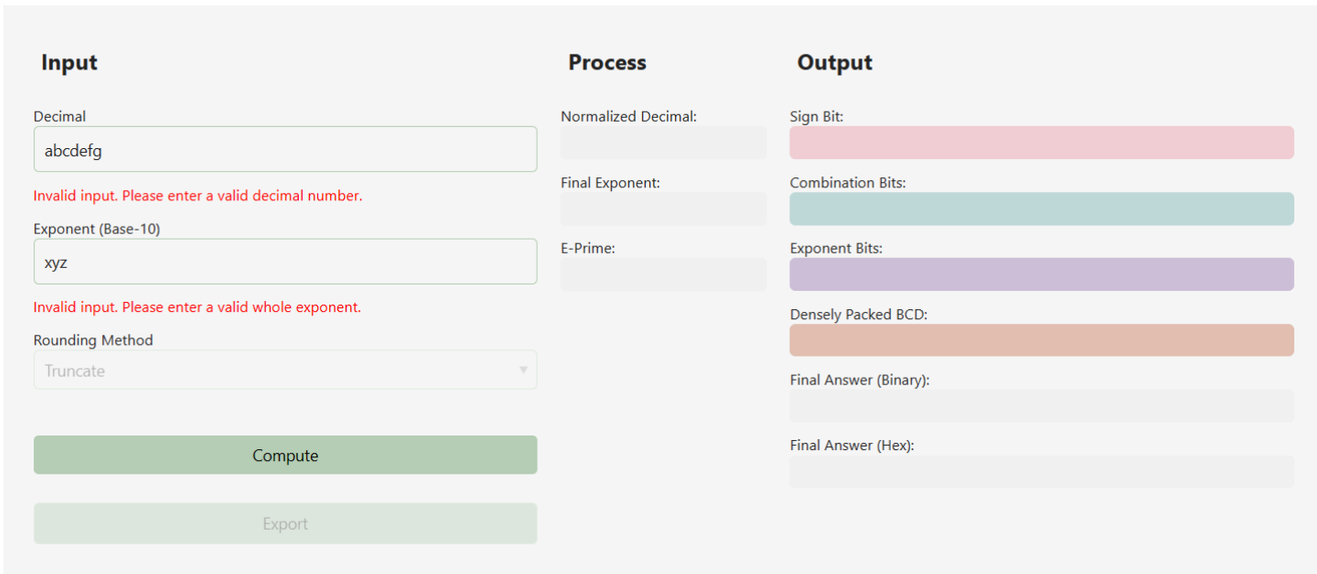
Test Case 48 - Invalid Decimal Input With Valid Exponent



Test Case 49 - Valid Decimal Input With Invalid Exponent

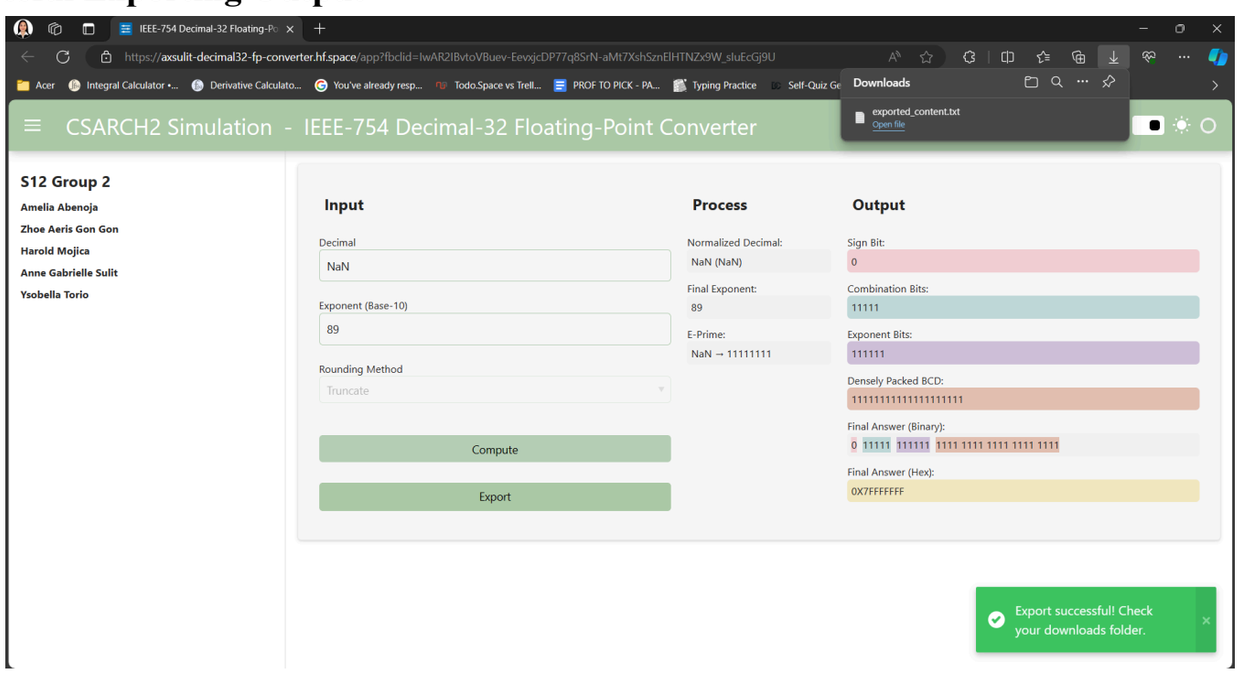


Test Case 50 - Invalid Decimal Input With Invalid Exponent



VII. Exported Output in Text File

Successful Exporting Output



Contents of Exported Output