Activity 7

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CST-150

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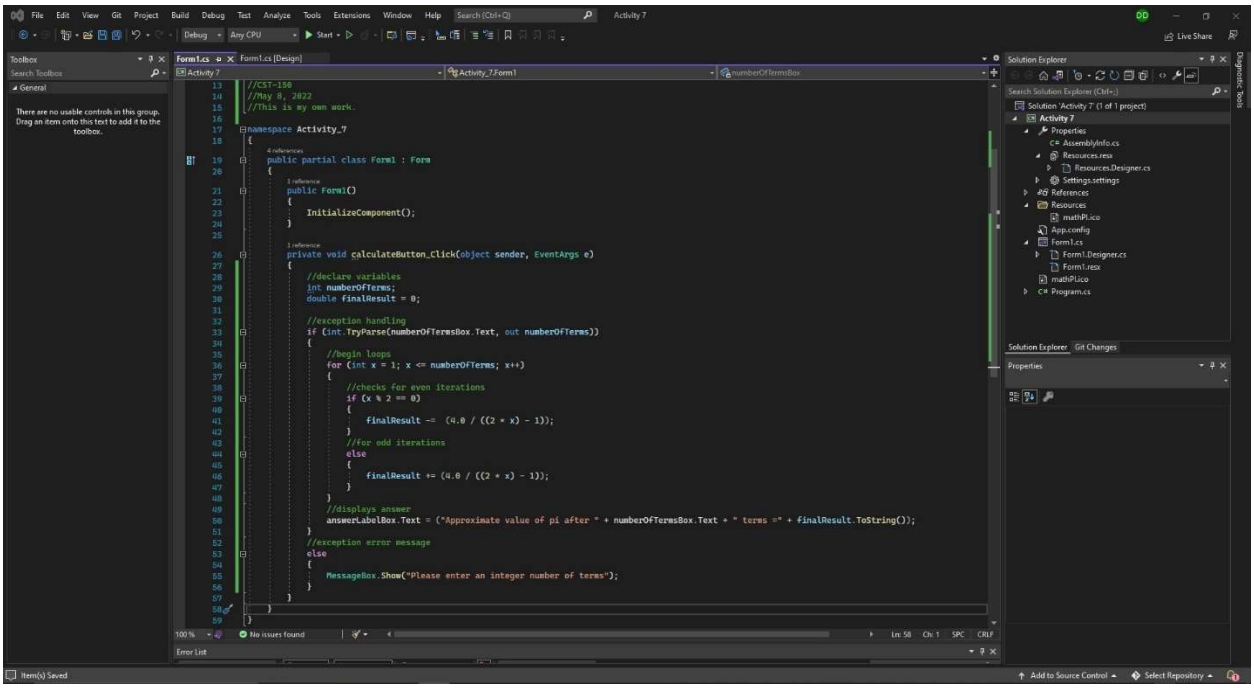
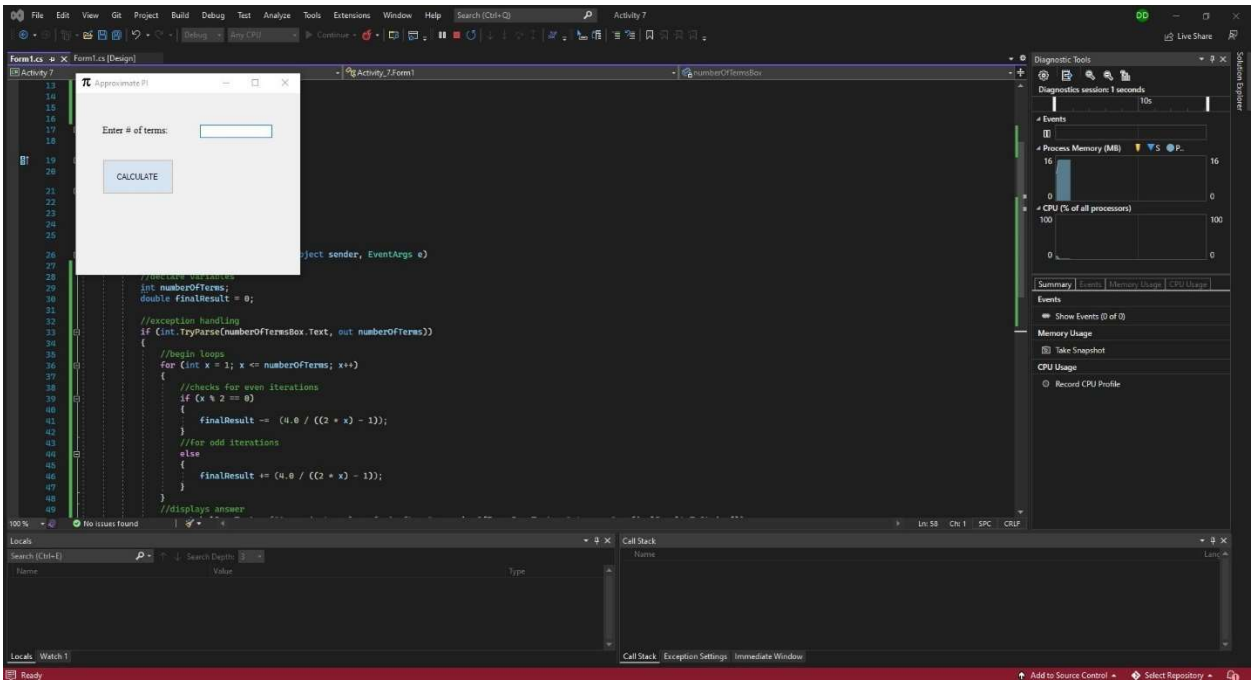
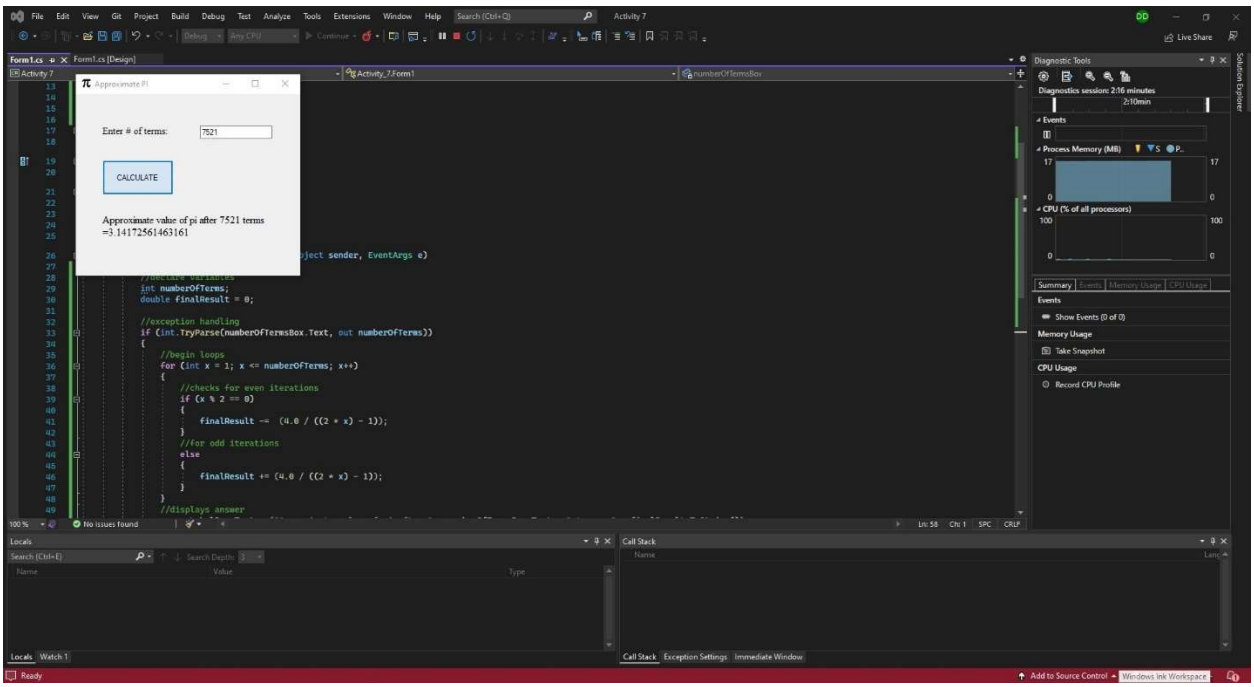
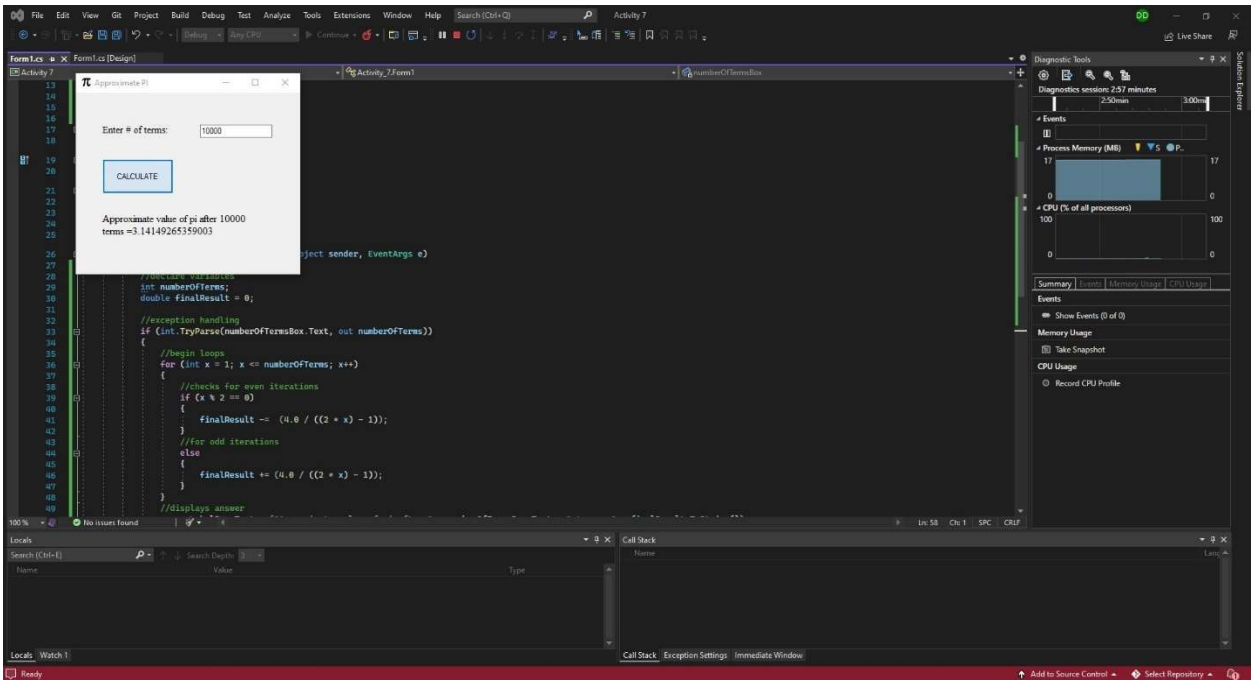
Link to files: https://github.com/Naralla/CST-150-Submissions/tree/main/Activity%207%20Submission

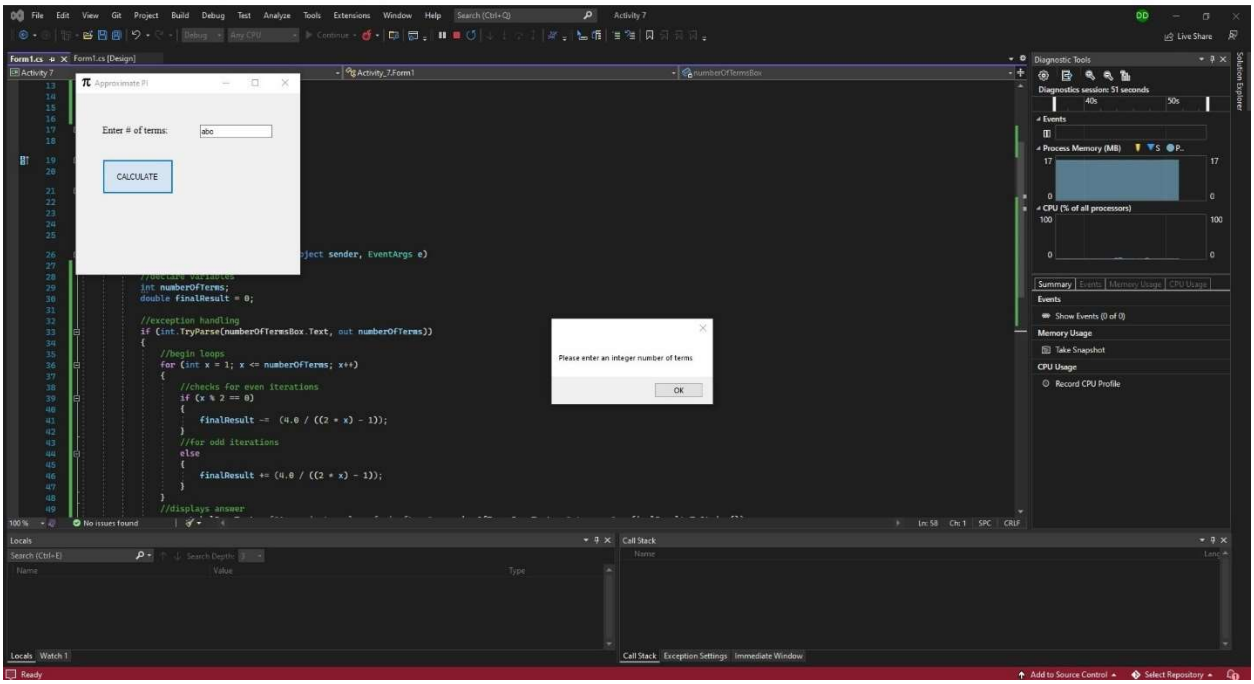
This program uses the C# language. This program's goal is to approximate the value of PI to the specified number of terms. This program could potentially be improved through the use of a different formula or perhaps a function that I am not aware of at this time.

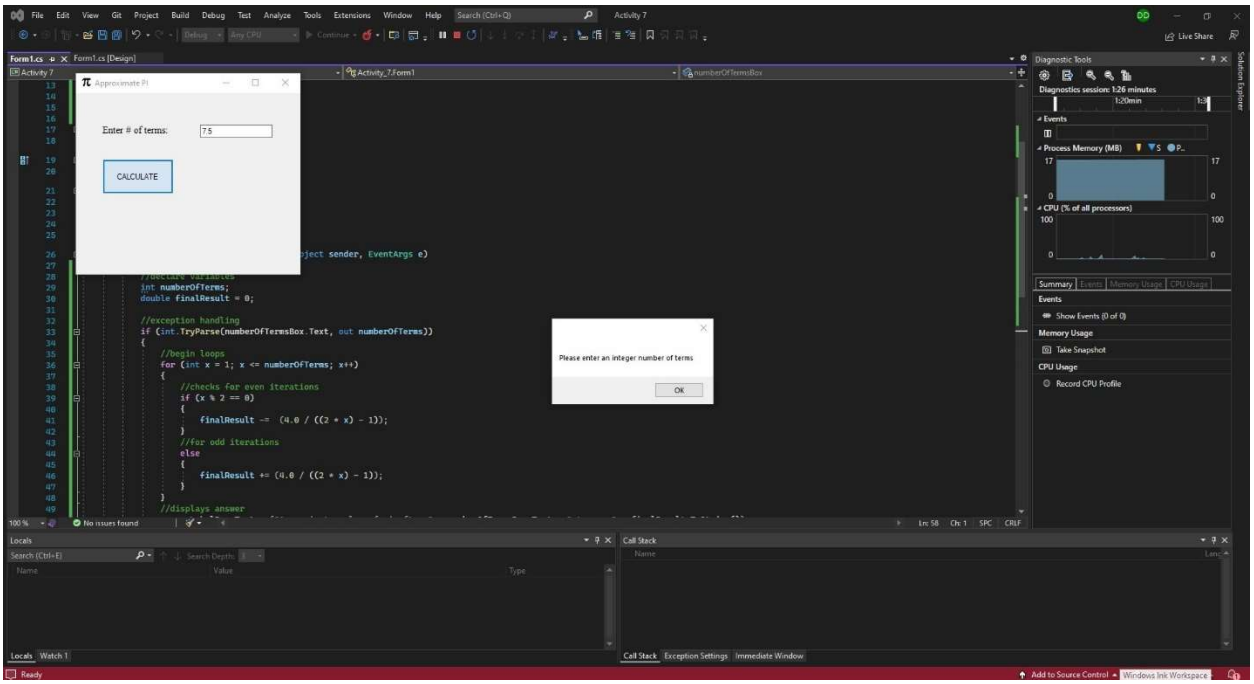



Approximate PI
Enter # of terms:
CALCULATE
int numberOfTerms;
double finalResult = 0;
//exception handling
if (int.TryParse(numberOfTermsBox.Text, out numberOfTerms))
//begin loops
for (int x = 1; x <= numberOfTerms; x++)
//checks for even iterations
if (x % 2 == 0)
finalResult -= (4.0 / ((2 * x) - 1));
//for odd iterations
else
finalResult += (4.0 / ((2 * x) - 1));
//displays answer


Approximate PI
Enter # of terms:
7521
CALCULATE
Approximate value of pi after 7521 terms
=3.14172561463161
int numberOfTerms;
double finalResult = 0;
//exception handling
if (int.TryParse(numberOfTermsBox.Text, out numberOfTerms))
//begin loops
for (int x = 1; x <= numberOfTerms; x++)
//checks for even iterations
if (x % 2 == 0)
finalResult -= (4.0 / ((2 * x) - 1));
//for odd iterations
else
finalResult += (4.0 / ((2 * x) - 1));
//displays answer


Approximate PI
Enter # of terms:
10000
CALCULATE
Approximate value of pi after 10000 terms =3.14149265359003


Approximate PI
Enter # of terms:
abc
CALCULATE
Please enter an integer number of terms
OK


Approximate PI
Enter # of terms:
7.5
CALCULATE
Please enter an integer number of terms
OK
int numberOfTerms;
double finalResult = 0;
//exception handling
if (int.TryParse(numberOfTermsBox.Text, out numberOfTerms))
//begin loops
for (int x = 1; x <= numberOfTerms; x++)
//checks for even iterations
if (x % 2 == 0)
finalResult -= (4.0 / ((2 * x) - 1));
//for odd iterations
finalResult += (4.0 / ((2 * x) - 1));
//displays answer