**Input**: The GUI takes the voltmeter, ammeter, and watt-meter readings of the open circuit and short circuit tests.

**Processing:** The code converts the string to float values and performs the necessary calculations to obtain the equivalent circuit parameters.

Let V1, I1, and W1 be the values obtained from the open circuit test and V2, I2, and W2 be the values obtained from the short circuit test.

**Calculation:**

From open circuit test:

cos () = W1/(V1\*I1)

sin () =

Ro = V1/Iw where Iw = I1cos ()

Xo = V1/Im where Im = I1sin ()

From short circuit test:

R01=W2/(I2)­2

Z01=V2/I2

=

**Output:**

Case-1: All input data were float variables and output is also float variable. The code enters parameter values Ro, Xo, R01, and X01 in the equivalent circuit of the transformer.

Case-2: Input data is float or input data is missing or data provided is wrong (negative values inside square root while calculation of X01 and calculation of sin ()) Program will show Invalid input.

Re-enter data

Input: Values from open circuit(V1,I1,W1) and short circuit tests(V2,I2,W2)

Clear

Submit

Calculation of

Open Circuit Parameters:

Ro, Xo

Short Circuit Parameters:  
Ro1, Xo1

Display: INVALID INPUT

Are all the variables float?

No

Yes

Display:

Ro, Xo, Ro1, Xo1 in ohms

Clear