UE17CS301-Computer Networks

Mini Project

CALCULATOR

Team Members

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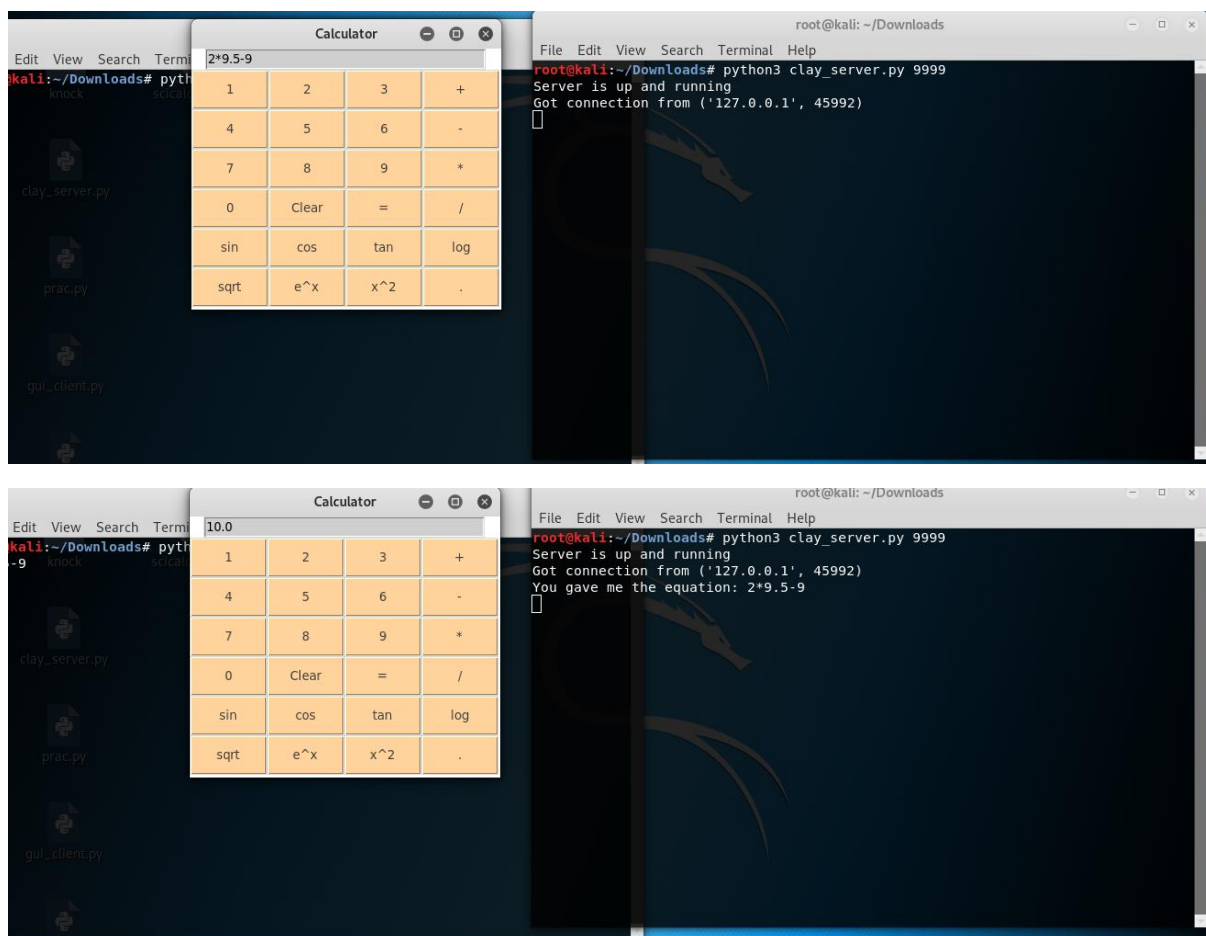Srivatsa – PES1201701132

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Abstract

Calculator is an electronic device used to assist humans to do various types of simple and complex mathematical calculations. We have implemented this calculator using TCP socket programing in python and has a client and a server
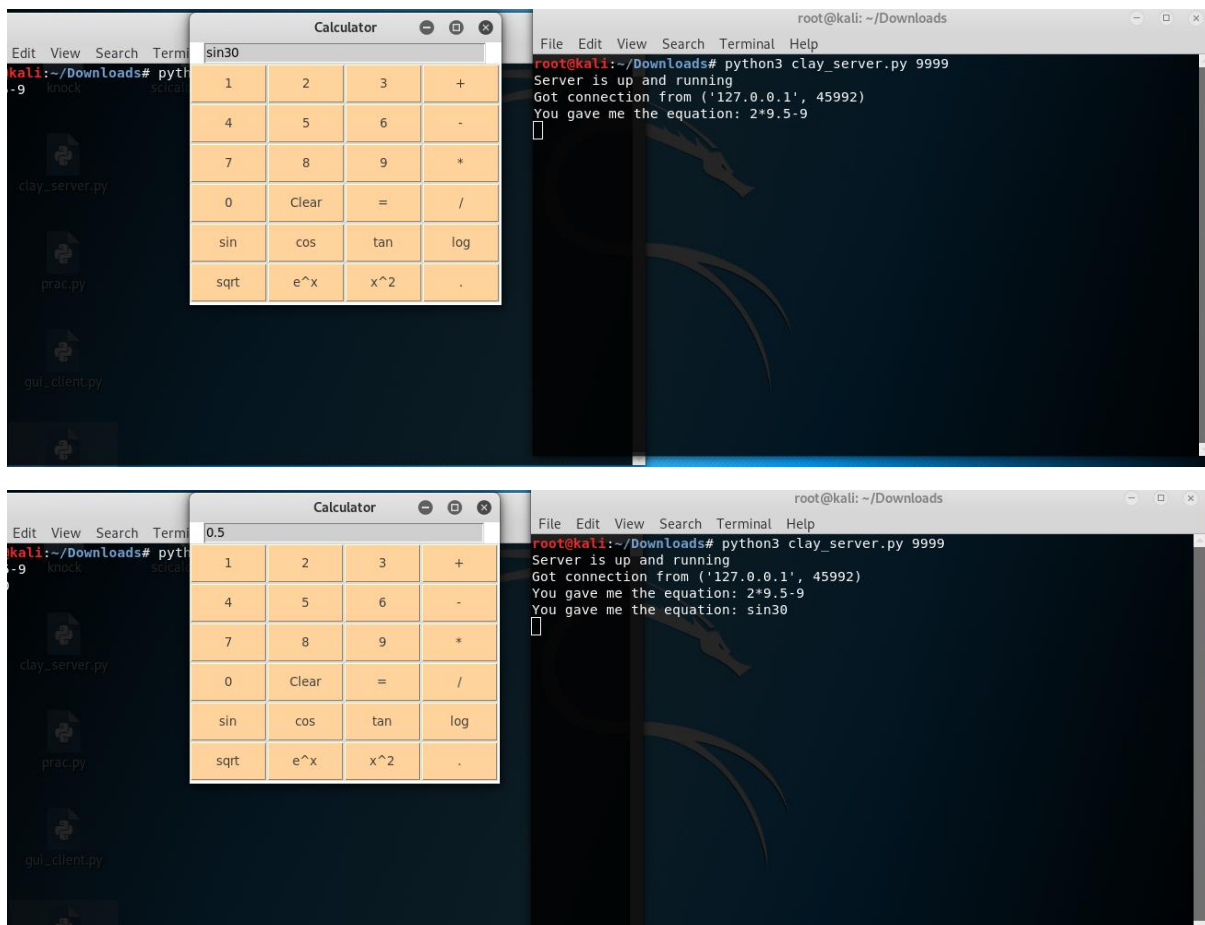
Description

A TCP connection is established between the client and server. We have one client and one server. The server is started first and is ready to take equations to be calculate from client. The client is implemented using tkinter which is a python module for Graphical User Interphase (GUI). The user types the equation at the client side which is sent to the server through socket. The calculations are done in the server and result is sent back to client. The result is displayed at the client side.

Below are a few screen shots of calculations done using GUI

Equation: 2*9.5-9

Equation: sin 30

The various types of simple calculations we implemented in this calculator are:

1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Square
6. Square root

The scientific calculations implemented are:

1. Sin
2. Cos
3. Tan
4. Log
5. e^x

All these operations can also be done using decimal numbers for which we have kept a separate "." Button.

Zero Division Error , Syntax Error, Math error and Name Errors are handled by exceptions.

Broken pipe error which occurs when client is closed is also handled effectively.

Network Components Used

1. TCP connection between client and server
2. Sockets

Modules Used

1. Tkinter
2. socket
3. math
4. sys

ClayNet Video Link

(Done without GUI on terminal)

**https://drive.google.com/file/d/0B3K0TOHzswzdY3JDdWlFWmdjd
mtSdWRBb1RzOG1lRjREUHJV/view?usp=sharing**