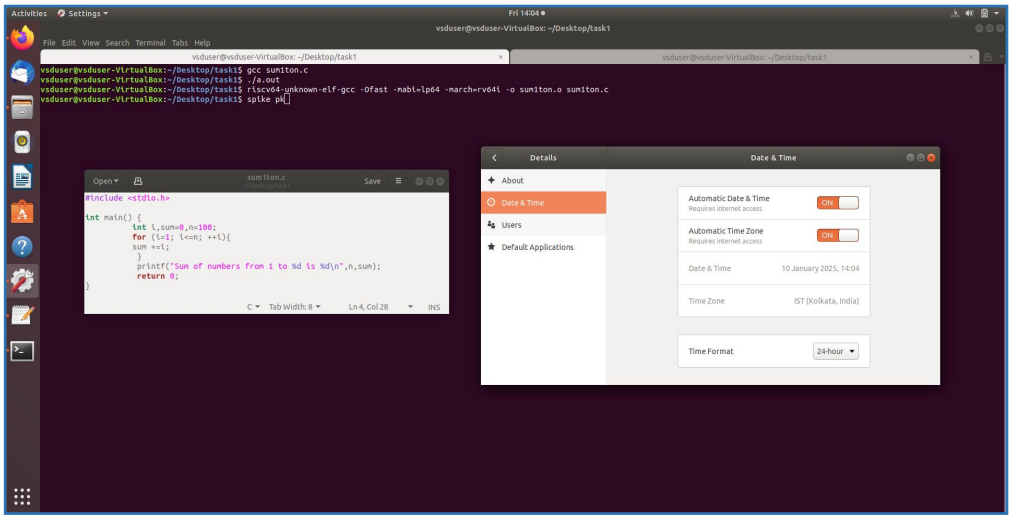
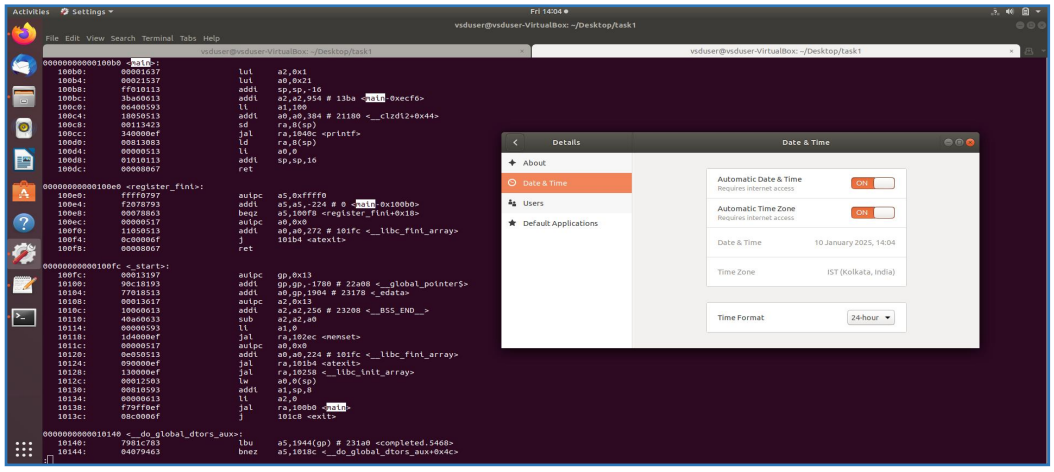
Karthik.M

TASK-2

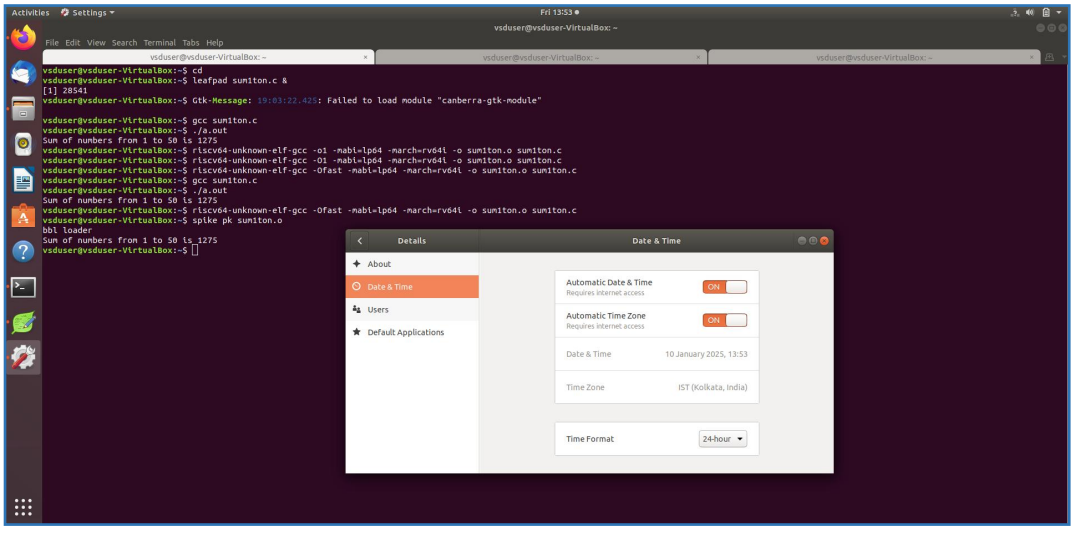
Debugging the sum of 1 to n C code using spike command



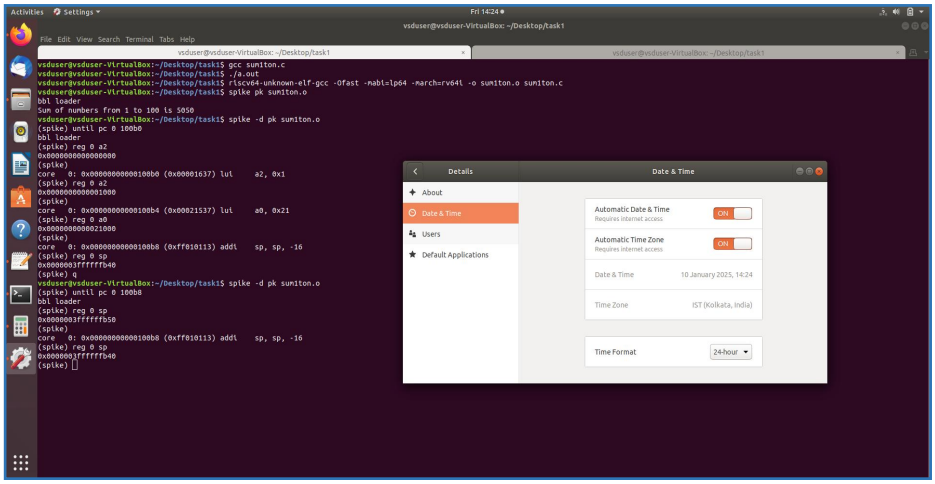
Compilation of sum of 1 to n C code



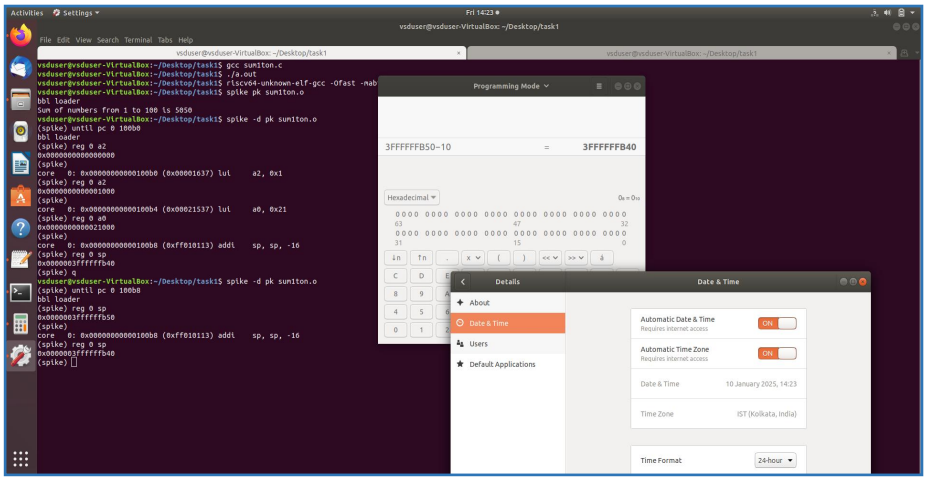
Compilation of sum of 1 to n C code using RISC-V Ofast



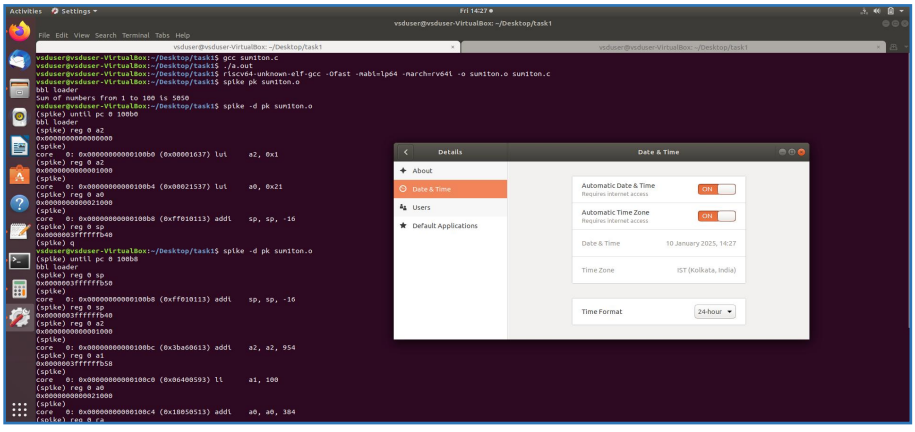
Debugging of sum of 1 to n C code using SPIKE command



Debugging of sum of 1 to n C code using SPIKE command,verifying the RISC-V output



Debugging of sum of 1 to n C code using SPIKE command,verifying the output using calculator



Debugging of sum of 1 to n C code using SPIKE command,verifying the all other outputs

Commands use & functions

lui a2 x01:- Load Upper Immediate

The lui instruction, it used to load a 16-bit immediate value into the upper 16 bits of a 32-bit register, setting the lower 16 bits to zero. It is particularly useful in situations where you need to construct a 32-bit constant, as it allows you to work with the upper part of the value directly.

addi a0,a0:- add immediate

The addi instruction is used to add a 16-bit immediate value to the value in a register and store the result in a destination register. It is commonly used for arithmetic operations and manipulating values in registers

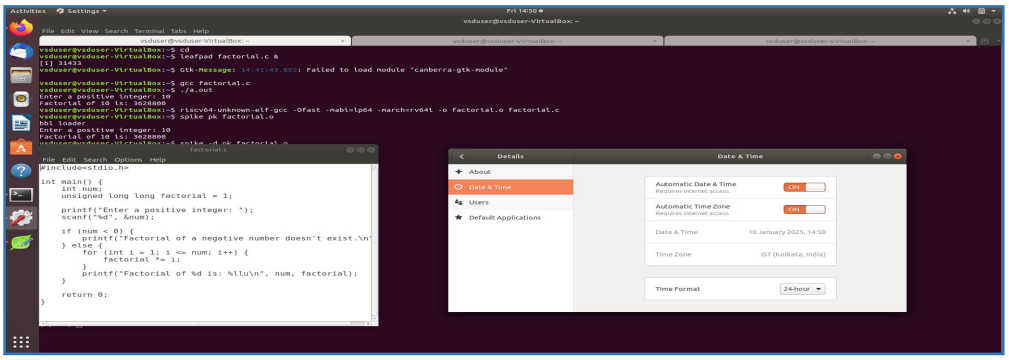
li :- load immediate

The li (Load Immediate) instruction is used to load a 32-bit immediate value directly into a register. This is a pseudo-instruction.

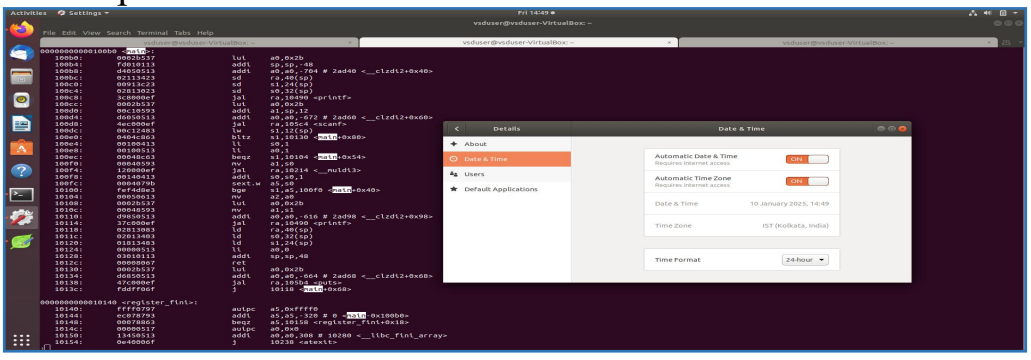
Sp:-Stack pointer

SP refers to the **Stack Pointer** register, which is conventionally used to manage function calls and local variable storage in the stack.

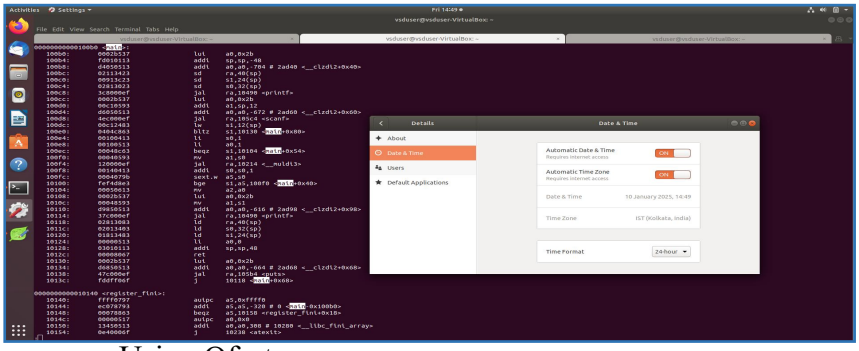
USING FACTORIAL OF A NUMBER



Compilation of code



Using O1



Using Ofast