Bahria University,

Karachi Campus

LAB EXPERIMENT NO.

02

LIST OF TASKS

TASK NO	OBJECTIVE
1.	Write a program that takes user input and then print counting from 0 till this number
2.	Write a program will take an input number from the user as the limit and then calculate the sum of all numbers starting from 1 up to the specified limit
3.	Write a program that print the series of odd numbers in the range of 0-10.
4.	Write a program that takes any hardcoded value input from user and then print the table of it.
5.	Write a program that takes two numbers as an input and perform multiplication iterative addition.

Submitted On:

Date: 26/9/2025

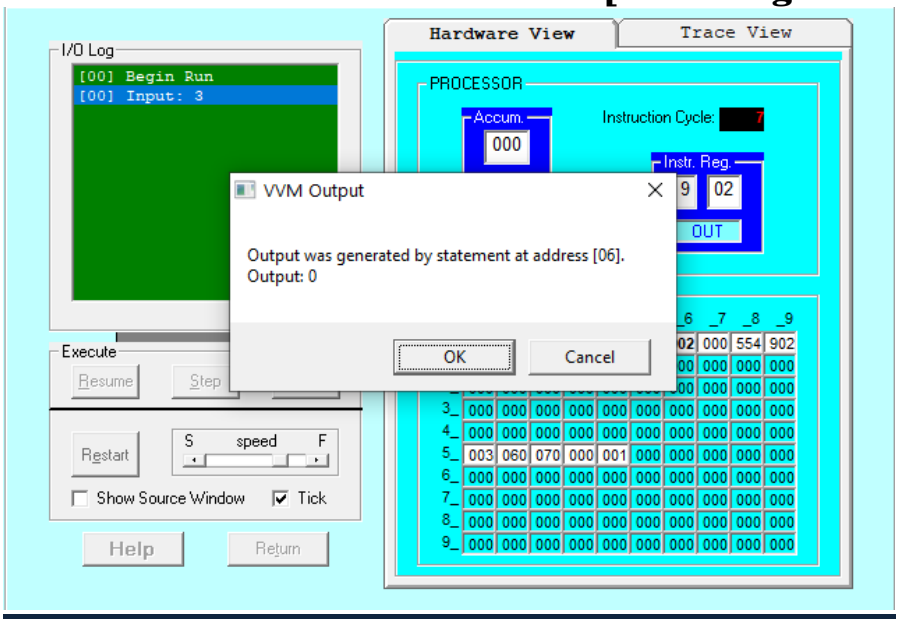
Task No. 01:

"Write a program that takes user input and then print counting from 0 till this number"

Solution:

VVM Assembly Language	*VVM Machine Language*
IN	901
STO 50	350
ADD 51	151
SUB 52	252
BRP 08	808
LDA 53	553
OUT	902
HLT	000
LDA 54	554
OUT	902
HLT	000
*51	*51
DAT 060	060
*52	*52
DAT 070	070
*53	*53
DAT 000	000
*54	*54
DAT 001	001

Output:



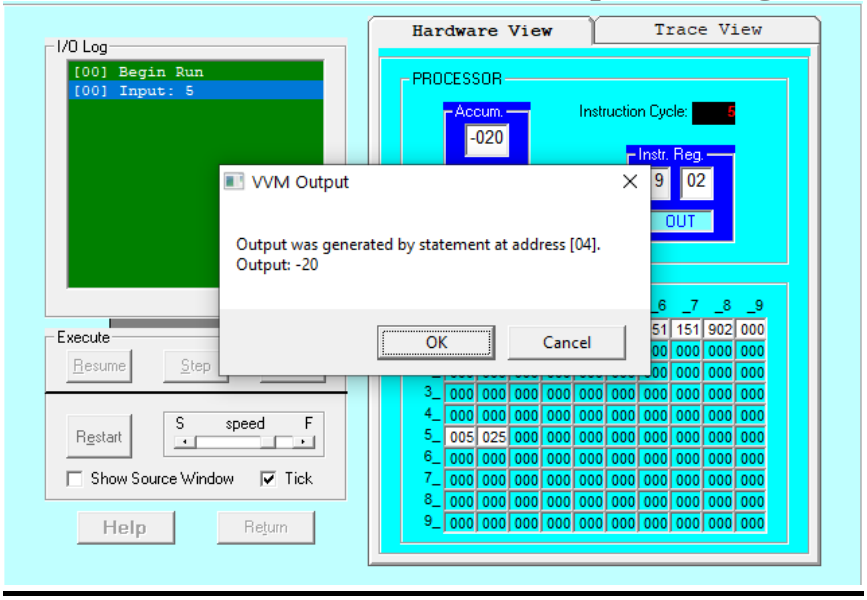
Task No. 02:

"Write a program that takes any number as input, and then perform following calculations:
- If number < 25, subtract 25 from it and print result."

Solution:

VVM Assembly Language	*VVM Machine Language*
IN	901
STO 50	350
SUB 51	251
BRP 06	806
OUT	902
HLT	000
ADD 51	151
ADD 51	151
OUT	902
HLT	000
*51	*51
DAT 025	025

Output:



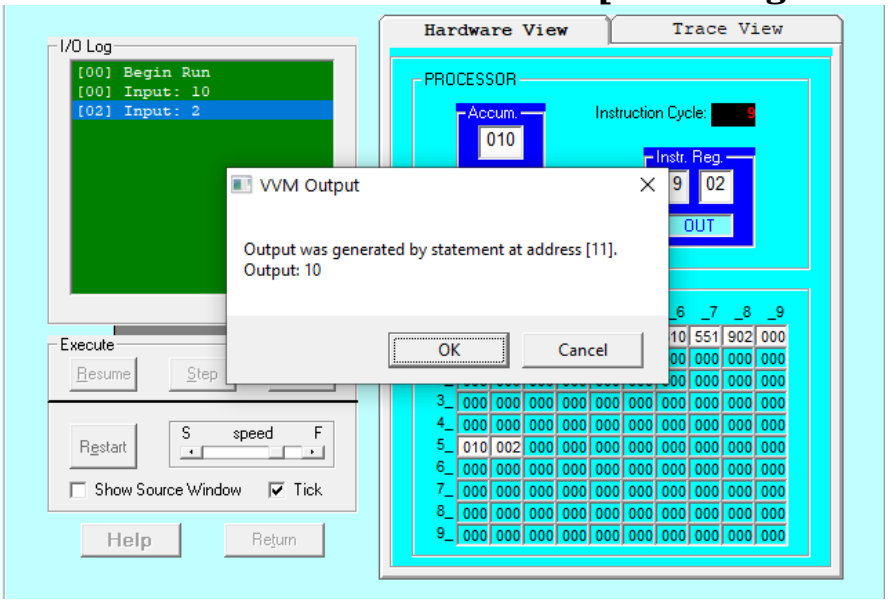
Task No. 03:

"Write a program that takes two numbers as input and then prints the larger one."

Solution:

VVM Assembly Language	*VVM Machine Language*
IN	901
STO 50	350
IN	901
STO 51	351
LDA 50	550
SUB 51	251
BRP 10	810
LDA 51	551
OUT	902
HLT	000
LDA 50	550
OUT	902
HLT	000

Output:



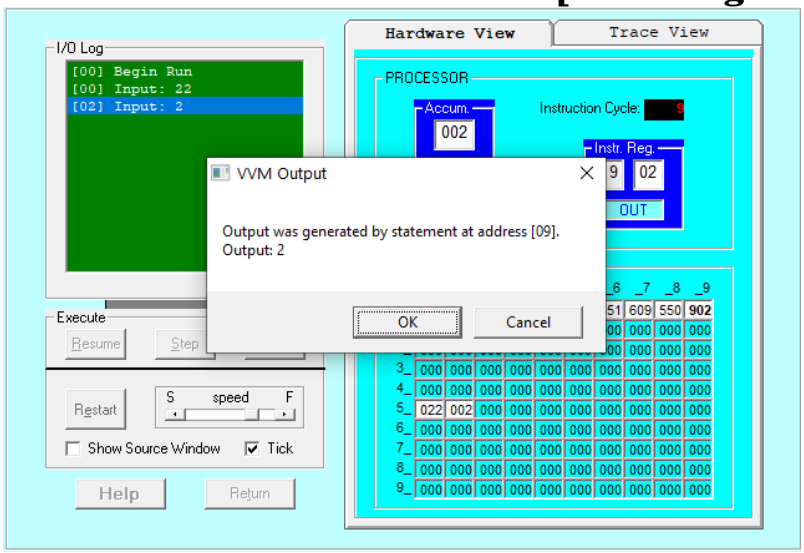
Task No. 04:

"Write a program that takes two hardcoded values and then print the smaller one."

Solution:

VVM Assembly Language	*VVM Machine Language*
IN	901
STO 50	350
IN	901
STO 51	351
SUB 50	250
BRP 08	808
LDA 51	551
BR 09	609
LDA 50	550
OUT	902
HLT	000

Output:



Task No. 05:

"Write a program in Visible Virtual Machine (VVM) language to implement the following logic:"

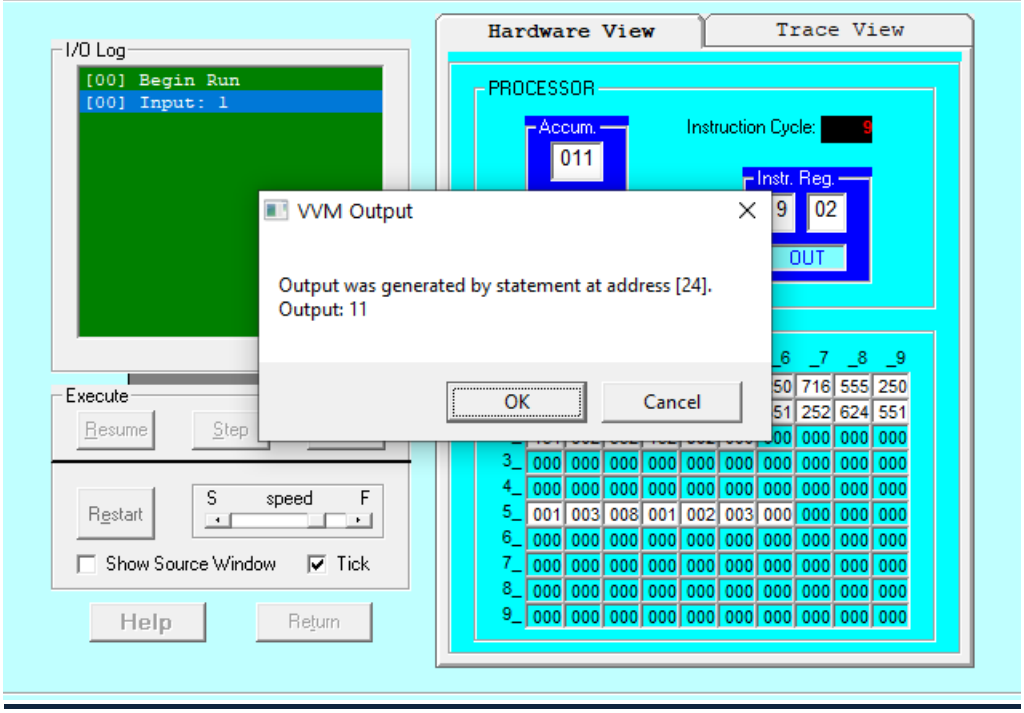
- *Let num1 = 3 (last digit).*
- *Let num2 = 8 (second last digit).*
- *Read an integer option from the user.*
- *Perform operations based on the value of option:*
  a. *If option = 1, calculate add = num1 + num2 and display the result.*
  b. *If option = 2, calculate subtract = num1 - num2 and display the result.*
  c. *If option = 3, calculate double1 = num1 + num1 and display it, then calculate double2 = num2 + num2 and display it.*
  d. *For any other value of option, display 0.*

Solution:

VVM Assembly Language	*VVM Machine Language*
IN	901

STO 50	350
LDA 53	553
SUB 50	250
BRZ 13	713
LDA 54	554
SUB 50	250
BRZ 16	716
LDA 55	555
SUB 50	250
BRZ 19	719
LDA 56	556
BR 24	624
LDA 51	551
ADD 52	152
BR 24	624
LDA 51	551
SUB 52	252
BR 24	624
LDA 51	551
ADD 51	151
OUT	902
LDA 52	552
ADD 52	152
OUT	902
HLT	000
*51	*51
DAT 003	003
*52	*52
DAT 008	008
*53	*53
DAT 001	001
*54	*54
DAT 002	002
*55	*55
DAT 003	003
*56	*56
DAT 000	000

Output:


I/O Log
[00] Begin Run
[00] Input: 1
Hardware View
Trace View
PROCESSOR
Accum.
011
Instruction Cycle:
Instr. Reg.
02
OUT
VVM Output
Output was generated by statement at address [24].
Output: 11
OK
Cancel
Execute
Resume
Step
Restart
S speed F
Show Source Window
Tick
Help
Return