Instrumentation and Process Control Laboratory Equipment and Experiment List

1. First Order Liquid Level System

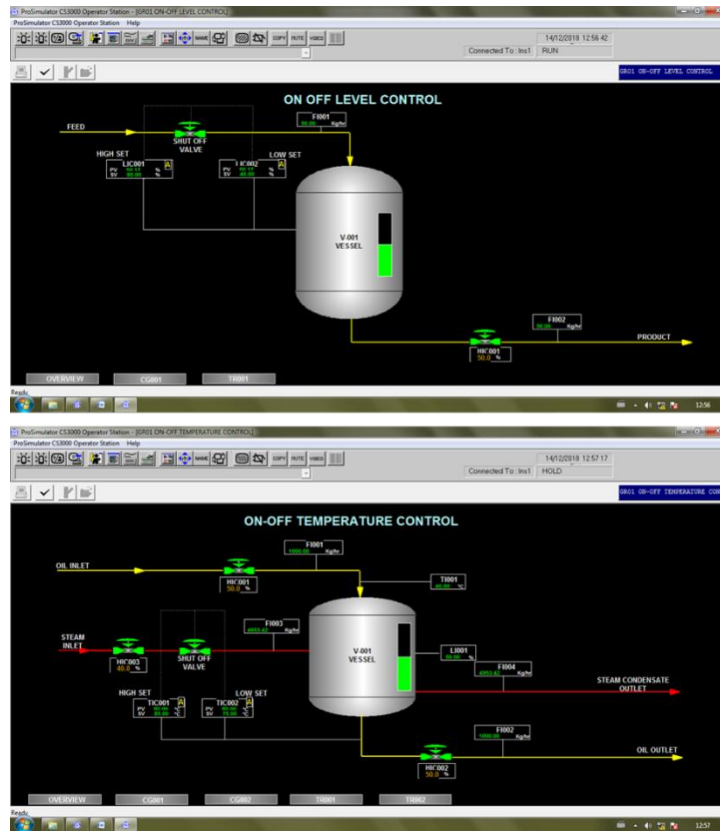
2. First Order Linearization

3. Second Order System (Non-Interacting Tanks)

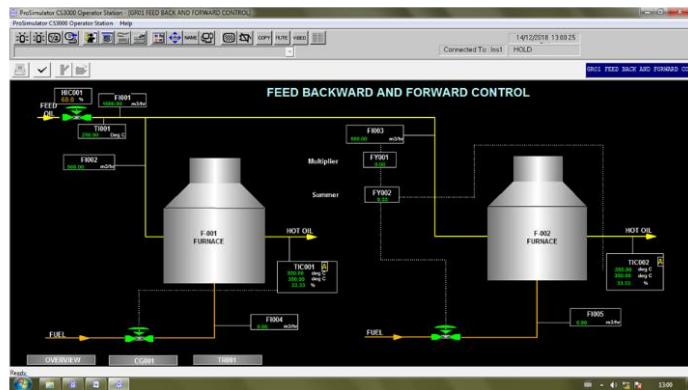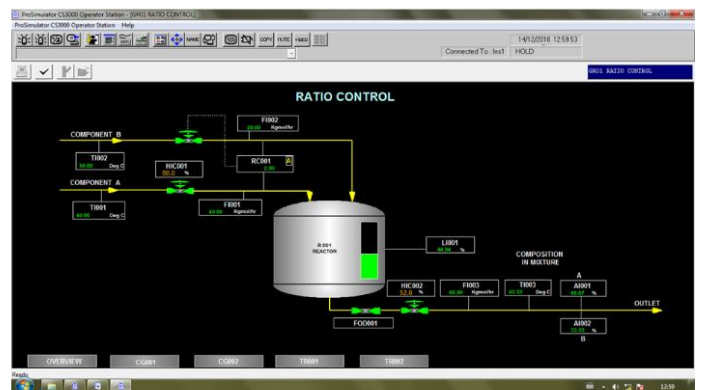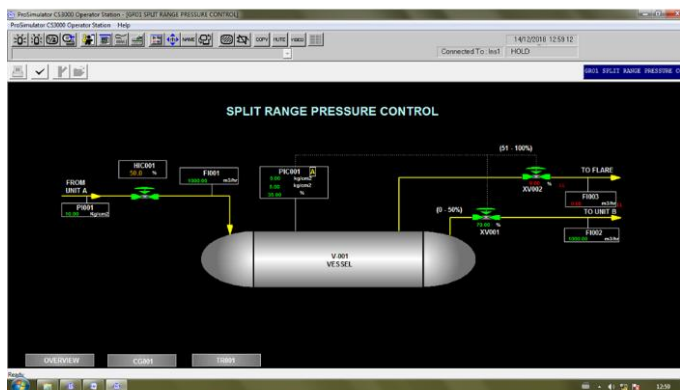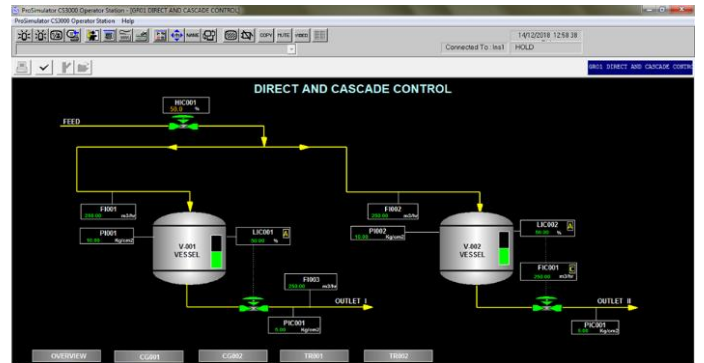**4. Second Order System (Interacting Tanks)**

5. Dynamics of Manometer

6. Simulation Software for understanding dynamics of On-Off level and temperature controller

ON OFF LEVEL CONTROL

ON-OFF TEMPERATURE CONTROL

7. Simulation Software for understanding dynamics of P and PI, Cascade and Direct, Split range, Ratio, Feed-forward and Feed-backward controller

EFFECT OF P AND PI CONTROLLER

DIRECT AND CASCADE CONTROL

SPLIT RANGE PRESSURE CONTROL

RATIO CONTROL

FEED BACKWARD AND FORWARD CONTROL
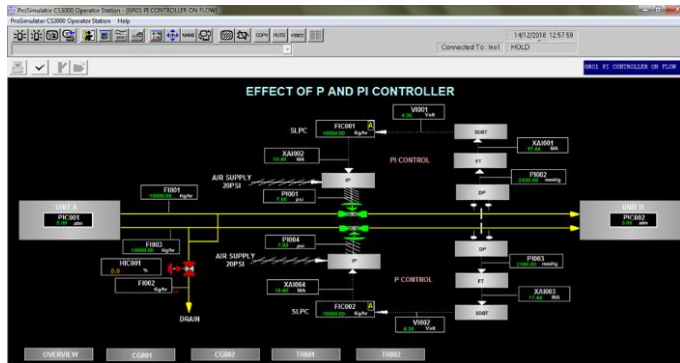
8. Simulation Software for understanding dynamics of Distillation, CSTR, PFR and Evaporator
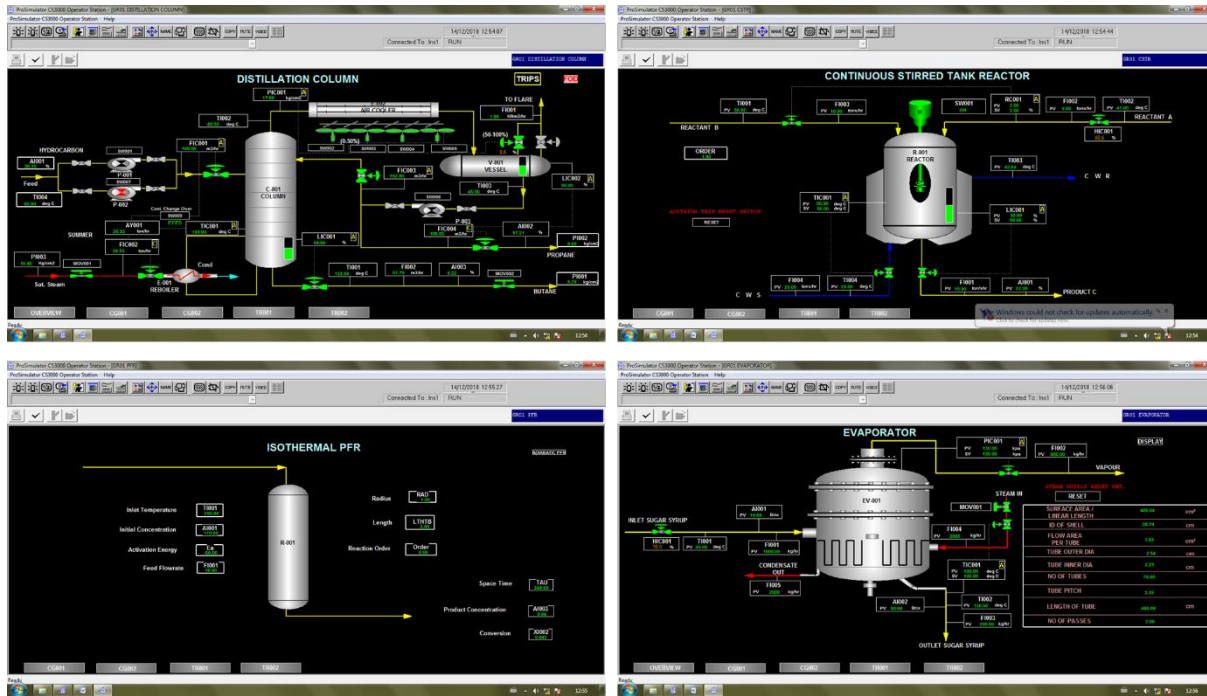
9. Flow Control Trainer

10. Pressure Control Trainer

11. Level Control Trainer

12. Temperature Control Trainer

13. Instrumentation: Anemometer, and Thermocouple Calibration

Sr. No	Experiment Title
1.	First Order Liquid Level System
2.	Linearization
3.	Second Order System (Non-Interacting Tanks)
4.	Second Order System (Interacting Tanks)
5.	Manometer
6.	Dynamic Simulation of On-Off Level and Temperature Controller
7.	Dynamic Simulation of P-PI Controller
8.	Dynamic Simulation of Cascade And Split RangeController
9.	Dynamic Simulation of RatioAnd Feed Back - Feed ForwardController
10.	Dynamic Simulation of Distillation Operation
11.	Dynamic Simulation of CSTR
12.	Dynamic Simulation of PFR
13.	Dynamic Simulation of Evaporator
14.	Demo of Control Trainer: Flow, Pressure, Temperature and Level Control
15	Demo of Instrumentation Equipments: Anemometer, Thermocouple Calibration, PH Meter