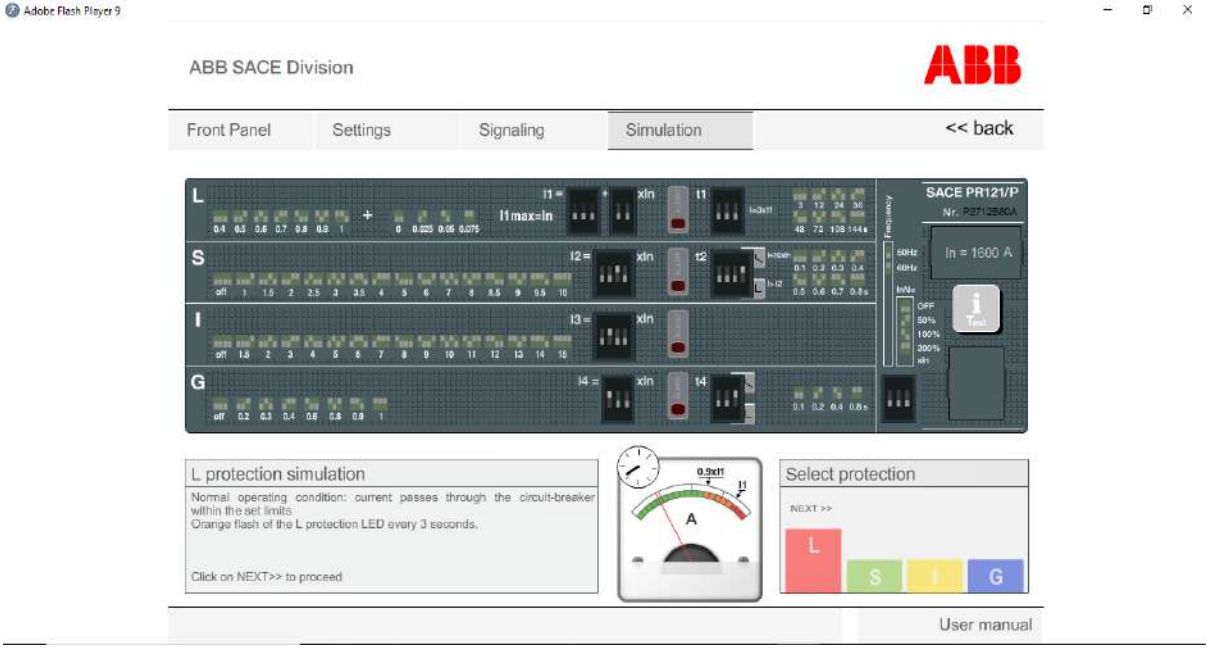
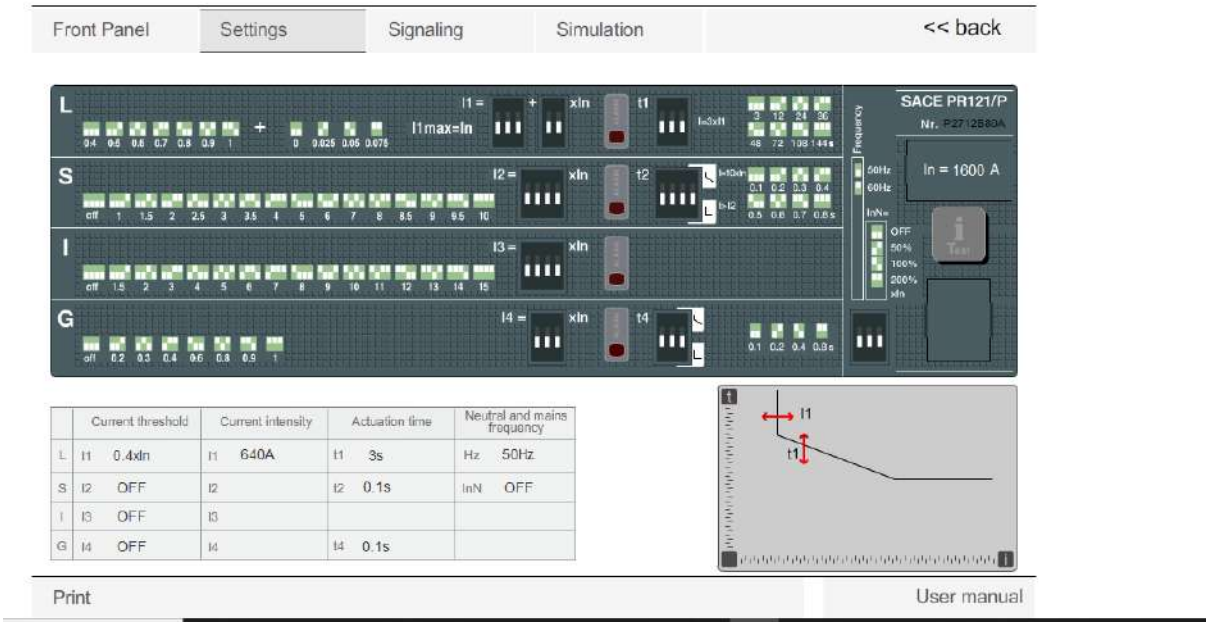
Department of Instrumentation and Control 22/8/2024

Innovative Teaching-Learning Method: Participative and experiential learning

Class	SE Instrumentation and Control
Name of Method:	Learning from Industry simulation (Experiential learning)
Subject:	Control System Components
Name of the faculty	Dr. A. R. Kulkarni
Date and Time	22/08/2024 1-45 to 2-45
No. of students present	34 (Total students 46).
Learning objective	This simulator will allow one to explore the interface, make a configuration, display the signals and conduct an operating simulation. One can select the required protection trip unit either directly or by pre-selecting the circuit-breaker in question. You can also print all the simulation masks.
Website link	https://new.abb.com/low-voltage/products/circuit-breakers/legacy-products/sace-new-emax/trip-unit-simulator
Outcome	4 students came to stage and used the software actually. While 30 observed how these operated that software.
Impact	Students explored IT tools in electrical relay control components; they see the unending sky of development. Students also see how computer engineering connects with electrical / instrumentation engineering.
POs and PSOs explored:	PO5(2), PSO2(2)

User	Q1	Q2	Q3	Q4	Q5	Q6	Q7
1	4	2	0	0	1	2	
2	4	2	0	3	3	2	
3	4	2	0	0	2	2	Good
4	4	2	0	0	2	2	Good
5	4	3	3	3	2	2	
6	5	2	3	3	3	2	No
7	4	2	0	0	2	2	
8	5	2	0	3	1	2	
8	3	2	3	1	3	3	
9	4	3	0	0	3	3	Good
10	4	2	3	0	1	2	Good
11	4	2	3	0	1	2	ðŸ‘
12	5	2	0	1	1	2	No
Avg.	4.15	2.15	1.15	1.08	1.92	2.15	
Scale 3	2.49	1.29	0.69	0.65	1.15	1.29	
		Avg. on scale 3					





Dr A R Kulkarni

Course coordinator

Dr B. J. Parvat

HoD

Control System Components Innovative Teaching Learning -Learning By Simulation Software 4-10-2024

ABB Circuit Breaker Interactive Simulation

* Indicates required question

1. Your Name (Last Name and First Name in CAPITAL LETTERS ONLY) *

2. I was (be honest with following options) *

Mark only one oval.

- present during this simulation of ABB Circuit Breaker SImulation Sessions
- I was absent
- I was absent but I have seen the software of my own

3. To what extent the simulation software did its work to improve teaching-learning *

Mark only one oval.

- (Scale 5) Excellent (I understood many things from simulation shown in class)
- (Scale 4)Very good (I learned better things)
- (Scale 3) Fair(I learned very few things)
- (Scale 2) Poor (I was present but I did not understand anything)
- (Scale 0) I was absent and I have not used link given on google classroom

4. 1) The software has menus/options like ---(hint multiple options may be selected)--- *

Check all that apply.

- [ ] Front Panel
- [ ] Signaling
- [ ] Settings
- [ ] Simulation
- [ ] all of above

5. 2) From Simulation WL COM stands from *

Mark only one oval.

- ◯ Wireless Communication
- ◯ Windows Level Communication
- ◯ Wire Level Communication
- ◯ Windo Less Communication

6. 3) The software shows ------- type of display *

Mark only one oval.

- ◯ LED display
- ◯ LCD Dsipaly without backlighting
- ◯ LCD Display with backlighting

7. 4) In L-Protection Simulation Section the analog meter shows ------(multiple options may be chosen) (see the figure) *

Mark only one oval.

- Normal condition
- pre-alram condition
- overload condition
- all of above

L-Protection Simulation from ABB Circuit Breaker simulation

8. 5) Which keys are provided on Display? (Multiple options may be chosen) *

Mark only one oval.

- ESC
- Up and Down Key
- Enter
- All of above

9. Suggestions

10. If absent you can download and install software from

Mark only one oval.

- https://new.abb.com/low-voltage/products/circuit-breakers/legacy-products/sace-new-emax/trip-unit-simulator