

IEEE vTOOLS Event Reporting

IEEE RAS Malaysia Chapter



Title of Event:	"Project Assignment for Industrial Automation (MCTE 3373)"				
Event	<input type="checkbox"/> Physical / <input checked="" type="checkbox"/> Virtual				
Description:	We arranged a project competition among the students who took the course Industrial Automation. We provided certificate/s of appreciation for the top performer/s. The detail of the event description is attached herewith.				
Keywords:	Robotics, Project				
Category:	<input type="checkbox"/> Professional	<input checked="" type="checkbox"/> Technical	<input type="checkbox"/> Non-Technical	<input type="checkbox"/> Administrative	
Sub-category:	Professional:	<input type="checkbox"/> Continuing Education	<input type="checkbox"/> Professional Development	<input type="checkbox"/> Industry Relations	<input type="checkbox"/> Professional (Other)
	Nontechnical:	<input type="checkbox"/> Social	<input type="checkbox"/> Awards Dinner	<input type="checkbox"/> Pre-Univ. activities	<input type="checkbox"/> Nontechnical (Other)
	Administrative:	<input type="checkbox"/> Vice chair		<input type="checkbox"/> Officer training	
Date and Time:	Due: 20/1/2022		Start Time:	End Time: 11:59 PM	
Event Location:	International Islamic University Malaysia				
Organizational Unit:	Department of Mechatronics Engineering and Autonomous Systems and Robotics Research Unit				
Attendance:	No. of IEEE attended:			No. of Guests/students attended:	~10
Registration:	<input type="checkbox"/> No registration required				
	<input type="checkbox"/> Registration required				
Registration Fees:	-				
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Photo/ Image

Industrial Automation

Assignment on PLC

IEEE RAS
MALAYSIA CHAPTER



 **LEADING THE WAY**
AN INTERNATIONAL AWARD-WINNING INSTITUTION FOR SUSTAINABILITY

PLC ladder logic design for a robotic workcell

- A conveyer belt is carrying pallet with raw material for CNC machining.
- When the **pallet stops at the** CNC machine center the PLC detects it. PLC then **activates a digital output** to the robot controller for a robot program to be initiated to take the raw material from the pallet and load on the machine.
- Once the part is loaded on the CNC machine **the PLC senses it by appropriate sensors**. Once PLC senses the part on the CNC machine it will start the pre-defined CNC program by sending a **digital signal to the CNC controller** thru PLC's standard digital output.
- Once the CNC program is completed the CNC controller will **send digital signal to the PLC to notify**.
- Once PLC receives that notifying signal it will initiate the second robot program to unload the part.



Your Task

- Simulate the program using RSLogiX.
 - Provide a video presentation of maximum 10 mins to explain your design process. Also demonstrate your simulation.
 - Submit a 2 page report on how you chose and implemented the sensors for the above task. Also explain the working procedure of your ladder logic sequence using a concise format.
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