Department of Mechanical Engineering
Academic Year 2021 – 2022 (Odd Semester)

Degree, Semester & Branch: VII Semester B.E. Mechanical Engineering
Course Code & Title: ME8099 & Robotics
Name of the Faculty member (s): Dr. J. Jabinth, AP/Mechanical

Innovative Practice Description

- **Unit / Topic: Unit IV / Simple Electronic Circuit design with Tinker CAD**
- **Course Outcome:** CO2
- **Date**: **29.09.2021**
- **Topic Learning Outcome:** TLO6
- **Activity Chosen: Interactive learning using Tinker CAD**
- **Justification:** Students must have some basic understanding about the electronic components and electronic circuits.
- **Time Allotted for the Activity:** 45 minutes
- **Details of the Implementation:** Tinker CAD is an online simulation tool. The tool is used to design new electronic circuits. Other electronic components can also be used for designing electronic circuits.
- **CO – PO / PSO mapping:**

PO	PO1	PO5	PO12
CO5	3	3	3

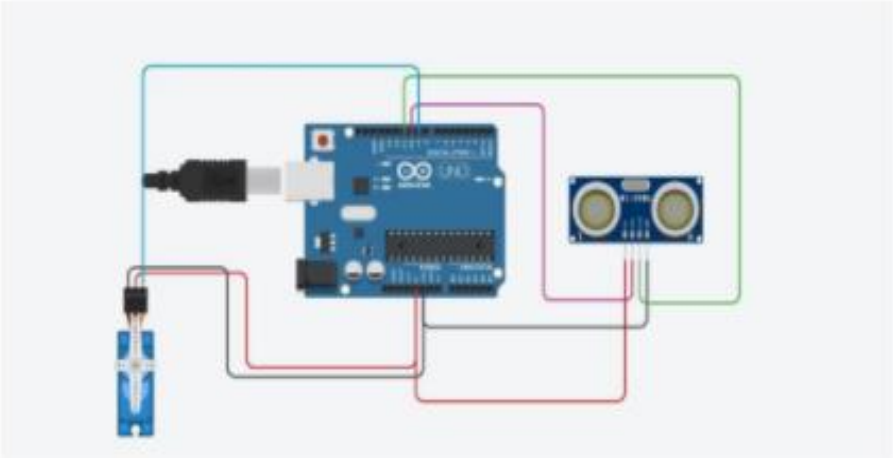
(1 – Low 2 – Moderate 3 – High)

- **PO / PSO mapped:**

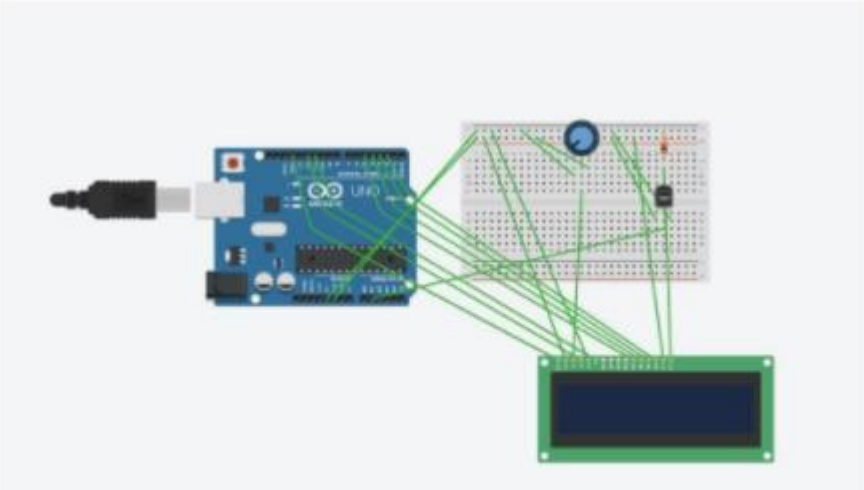
Innovative practice	PO1	PO5	PO12
	3	2	3
Justification for correlation	Students must have fundamental knowledge in the topics learnt in subject	Simulation using Tinker CAD	They can do the same simulation for many other robotic circuits.

Tinker CAD assignment submission by students:

1) **Circuit of automatic sanitization using ultrasonic sensor and servo motor in tinker cad**



2) **A temperature scanner using TMP temperature sensor and display value on LCD when push button is pressed using tinker cad.**



- **Reflective Critique:**
  - ❖ ***Feedback of practice from students and other stakeholders:***
    Based on the feedback received from students, they told that it was easy for them to understand the working of electronic components.

  - ❖ ***Benefit of the practice:*** (E.g.: Outcome attainment would have increased due to innovative practice over conventional practice)

Students can replicate any type of circuit in TinkerCAD.

- ***Challenges faced in implementation:***
  - Students felt difficulty in understanding the operations of electronic components.

References:

- https://youtu.be/JmUt9O4c2-c
- Groover M.P., "Industrial Robotics -Technology Programming and Applications", McGraw Hill, 2001.

Signature of Faculty Member **HOD**