SMART WATER SYSTEM USING TINKERCAD

PHASE 3 : PROJECT DEVELOPMENT

To create a water system simulation using Tinkercad, you can use various components to design a virtual circuit. Here are some essential components you might need:

COMPONENTS :

1. Arduino Board
2. Water Pump
3. Water Flow Sensor
4. Tubing/Pipes
5. LEDs
6. Resistors
7. Breadboard
8. Jumper Wires
9. Power Source

PROCEDURE :

1. Set Up Your Tinkercad Account

- Go to Tinkercad website and create an account if you haven't already.

2. Create a New Circuit

- Click on "Create new circuit" to start a new project.
- Drag and drop an Arduino board onto the workplane.

3. Add Components

- Add a water level sensor: Search for a water level sensor component and place it on the workplane.
- Add a water pump: Search for a water pump component and place it on the workplane.
- Connect the components: Use wires to connect the output of the water level sensor to the input of the Arduino board. Also, connect the output of the Arduino board to control the water pump.

4. Write Code (Arduino Programming)

- Click on the Arduino board to open the code editor.
- Write code to read data from the water level sensor and control the pump based on the water level. For example, if the water level is below a certain threshold, turn on the pump; otherwise, turn it off.

5. Simulate and Test

- Click on the "Start Simulation" button to test your water system simulation.
- Observe the behavior of the system. The pump should turn on when the water level is below the specified threshold.

6. Fine-Tuning and Experimentation

- Adjust the sensor threshold and experiment with different conditions to see how your water system behaves.
- You can add more components, such as LCD displays to show the water level, or additional sensors for temperature or pressure.