Project: Data Sensing and Collection Using Raspberry Pi

Instructions

1. **Objective**: Utilize Raspberry Pi to collect environmental data, such as temperature and humidity, within the CAED building. The goal is to understand and analyze environmental conditions by focusing on specific, justified locations.
2. **Location Selection**: Identify specific locations within the CAED building for data collection. Provide a detailed explanation of why each location is significant or interesting for your study (e.g., areas with varying foot traffic, proximity to heat sources, or differences in sunlight exposure).
3. **Team Formation and Roles:**
   - Form a team of 4-6 students, ensuring diversity in skills and perspectives.
   - Assign one team leader responsible for:
     - Coordinating with the instructor to borrow and return equipment.
     - Managing communication and ensuring task distribution among team members.
   - Each team member must have clear, defined responsibilities, and these should be explicitly documented in the report.
   - Please take photos for your data collection process and attach pictures with all your team members :-)
4. **Responsibility Allocation:**
   Specify the tasks each team member undertakes in the project. For example:
   - Equipment setup and calibration.
   - Data collection at designated locations.
   - Data analysis and visualization.
   - Report writing and editing.
   - Backup and archiving of all collected data.
5. **Experimental Procedure:**
   - Follow scientific practices in your project workflow.
   - Record all steps, observations, and intermediate findings in a clear and organized manner.
   - Backup your data frequently to avoid loss.
6. **Device Handling:**
   - Exercise caution when handling electronic devices. Ensure that Raspberry Pi and associated sensors are not exposed to liquids or environments that may cause damage.
7. **Project Extensions:**
   You are encouraged to extend this project into a larger final project. For instance:
   - Add additional sensors (e.g., light, air quality).
   - Integrate cameras or other devices for advanced data collection.
   - Collaborate with the instructor if additional equipment or guidance is required.