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|  | **BAHRIA UNIVERSITY,**  **(Karachi Campus)**  *Department of Software Engineering*  **ASSIGNMENT 04 – Fall 2023** |

COURSE TITLE: **Computer Communication & Networks** COURSE CODE: **CEN-223**

Class: **BSE - 5** Shift: **Morning**

Course Instructor: **Dr. Muhammad Hussain** Date: **Dec 11, 2023**

Due Date: **Oct 30, 2023** Marks: **5.0 Marks**

Investigate the paradigm behind the Internet of Things by evaluating recent literature.

CLO 6

Prepare a 15 - 20 slides presentation in MS power point that would propose a solution for a real-world problem while employing the Internet of Things (IoT) paradigm. A list of suggested real-world challenges are provided below from which the students may choose or bring their own problem to solve. However, you can only work on the presentation topic after being approved by the course instructor.

The group needs to present that how IoT can help in solving the problem at hand. While finding a suitable solution, the learning process should require students to investigate and critically analyze the communication technologies available under the umbrella of IoT. This exercise would require group activity where collaboration and group discussions should be involved. Architectural diagrams, system design, hardware/software requirements, deployment requirements, communication technologies along with other technical details should be addressed. The presentation content should be technical in nature, i.e. going with the general patterns adopted in the relevant course, Computer Communication & Networks.

Technical contents of the presentation can only be prepared after conducting a thorough investigation regarding the concerned topic. Each member is required to present his/her part, where the presentation will be followed by cross-questioning from the course instructor and session guest (if any). All student should have knowledge regarding the complete contents within the presentation rather than focusing of the contents of his/her part only. Presentation MUST be self-made, where its emailed softcopy will be checked for plagiarism (if needed).

Note: one topic can only be taken by one group at a time.

List of Suggested Real-World Problems:

1. Monitoring patients’ health remotely.

2. Monitoring surrounding environments for CO2 emission.

3. Monitoring electric consumptions within a house.

4. Monitoring the health of machines within a production plants.

5. Monitoring gas distribution pipelines for leakage and damages.

6. Monitoring agriculture fields for plants health.

7. Monitoring goods shipment, warehouse storage and logistics.

8. Monitoring health of bridges, buildings and other structures.

9. Monitoring forests for wildfire and other hazardous materials.

10. Improving safety for vehicles on the road.