جامعة الحسين التقنية
Al Hussein Technical University

ASSIGNEMNT BRIEF

HTU Course No: **40201441, 30202452**	HTU Course Name: Internet of Things
BTEC UNIT No	BTEC UNIT Name :

Version: 1

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Assignment Brief

Student Name/ID Number/Section	
HTU Course Number and Title	**Internet of Things - 40201441, 30202452**
BTEC Unit Number and Title	
Academic Year	2022/2023
Assignment Author	Feras Diab
Course Tutor	Feras Diab
Assignment Title	Final Project
Assignment Ref No	5
Issue Date	31/12/2022
Formative Assessment dates	
Submission Date	**04/02/2023**
IV Name & Date	

Submission Format

The assignment submission will be in format of report document associated with the demo recording evidence and code used in the project hardware programming. The report should contains the following:

- Project Need
- Problem Analysis
- Solution Description
- Road map and Phases
- Competitive Analysis
- Project Implementation Plan
- Solution Architecture
- List of Components
- Results
- Customers Feedback
- Feedback and Results Analysis
- Recommendations
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In addition:

- Power Point Presentation
- Video Recording for the demo evidence
- The Code used in the circuit

Unit Learning Outcomes
LO1 Build fundamental knowledge in IoT concepts, applications, platforms, components, and skills need to build an IoT solution **LO2** Understand the Design Thinking approach and methodology and apply them in exploring a market need and put a solution to solve that problem **LO3** Use the theoretical and practical knowledge and skills obtained to build a solution design in IoT **LO4** Being able to plan and build successfully a real prototype for the IoT solution proposed **LO5** Being able to present the solution details and demonstrate the running prototype explaining the results found and collect some customer feedback and being able to analyse it and understand it

Assignment Brief and Guidance

You are requested to utilize the knowledge and research done throughout the course and the technical practical skills that you have learned in the practical part of the course; in addition to the Design Thinking approach to look for a market need and analyse the problem behind it and come up with an idea and solution for that problem.

Then you need to plan for that solution project implementation and how are you going to reach the final results successfully.
The solution design and architecture with all the components needed need to be illustrated and explained in details.

Then after that you need to assemble the hardware components and program them using the software programming tools and platforms explained previously to make sure you have a running prototype.
Finally you need to do some customer feedback surveying and collection to understand their opinion of the solution and the results achieved.
At the end of the project you need to demonstrate and present the solution with the running prototype and brief presentation to explain what have been done and where you have reached.

Learning Outcomes and Assessment Criteria			
Learning Outcome	**Pass**	**Merit**	**Distinction**
LO1 Build fundamental knowledge in IoT concepts, applications, platforms, components, and skills need to build an IoT solution	**P1** Research and understand the different IoT use cases and industries and choose one to talk about		**D1** Explore the competitive analysis for the solution within the market
	P2 Explore the different IoT protocols, networks, platforms, sensors, and actuators and compare between them		
LO2 Understand the Design Thinking approach and methodology and apply them in exploring a market need and put a solution to solve that problem	**P3** Apply the concepts of Design Thinking on identifying specific problem and need	**M1** Being able to find a real reasonable problem and innovative solution for it	**D2** Put an innovative road map for the solution that take into consideration the market and problem needs and customers' expectations
	P4 Analyse the problem found and think of an innovative solution for solving it		

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Al Hussein Technical University

LO3 Use the theoretical and practical knowledge and skills obtained to build a solution design in IoT	**P5** Build an architecture and choose the different components for the solution identified	**M2** Being able to try and choose between different protocols and platforms and choose the best among them for the project	
	P6 Using the major component of the IoT which is the platform and using the internet to reach it		
LO4 Being able to plan and build successfully a real prototype for the IoT solution proposed	**P7** Plan the project on how to build the solution using the good practices of the simple project management techniques and concepts	**M3** Finish the solution implementation with final results and successful demonstration	
	P8 Execute the project plan prepared and the solution architecture built to build the project solution	**M4** Document the project and the solution with excellent technical writing skills and proper report and presentation	

		M5 Showed excellent discipline and commitment for planning and finding the innovative solution	
LO5 Being able to present the solution details and demonstrate the running prototype explaining the results found and collect some customer feedback and being able to analyse it and understand it	**P9** Document the project and the solution details in proper technical writing report and presentation	**M6** Collect feedback from sample customers and users for the solution and document their feedback and opinions	**D3** Showed presentation skills and understanding of the solution and the problem solved
	P10 Demonstrate and present the final solution and results to audience		**D4** Analyse the feedback collected and propose solutions and recommendations for the future implementation and roadmap