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**M. Almaani, M. Aljaran, A. Alkaraki**

**Supervisor: Dr. Esam Qaralleh  
Embedded Systems Final Design Project Report , Spring 2025   
King Abdullah II School of Engineering**

**Princess Sumaya University for Technology**

**Abstract**

Our poject is an embedded system that aims to improve animal care through automating the feeding process. It consists of various sensors and actuators to detect an animals presence, dispense food at regular intervals, provide water whenever needed via a pump, and notify the animal owner whenever the reservoirs run out and need refilling. The goal was to do these tasks while remaining cost effective and hassle free. We used the pic16f877a microcontroller implemented low level C code( with bit-masking and without the use of libraries) to produce the final product.

**Introduction**

With the increasing national and global demand for farming and reduction in prospective farmers, a project such as ours would help lessen the load on said farmers and help reduce labor and toil while also being inexpensive and low-maintenance. This project focusing on building an automated animal feeding unit using the pic16f877------------------------------------------

**Design**

**Conclusion**

This embedded system effectively automates the two essential animal care tasks which are providing food and providing water and it does it cost-effectively and in a low-maintenance, low power consumption, hassle-free approach using the pic16f877a microcontroller and the above mentioned sensors and actuators