



Project title: Smart Medication Dispenser Robot **Academic Year:** 2024

Project Type: Hardware

Department Name: C.E department

Supervisor Name: Dr Anas Toma, Dr Ashraf Armoush.

Group members: 1- Aya Moeen Awwad
2- Lujain Darwazeh

Project's Abstract:

In hospitals, nurses may make mistakes in dispensing medication to patients or distributing it at the wrong time, so we decided to make a robot based on the RTC system, and start moving to distribute medication to patients.

The goal of our project is to support the work of nurses. The robot dispenses the correct medication to each patient independently at specific times, ensuring accurate delivery, adherence to the specified schedules, and avoiding human errors.

Once the robot reads the patient's ID, it enters the database to retrieve the patient's medication schedule. The robot then distributes the medication appropriately to the patient. After collecting the pills on the conveyor, they are transferred to a platform. Then they move up until they reach the patient's height. It also contains an audio alert to inform the patient when the medication is ready to be received.

It also allows monitoring the patient's vital signs such as measuring oxygen level, heart rate, and temperature and displaying them on an LCD screen. In case of abnormal readings, a notification is sent to the nurse to inform her to take immediate action.

The nurse can refill the medication as the robot will notify the nurse if one of the medications in the tubes runs out, through a notification.