Cover page

Project title: Pick at Locker

Academic Year: 2023-2024

Group Members: Raghad Shehadeh

Zaina Zaben

Department Name: Computer Engineering

Project Type: Hardware

Supervisor Name: Dr. Aladdin Masri

Format:

- Single space, Times New Roman.
- 12 pt,
- Maximum 1 page.

Abstract Body:

Items must be provided in the Abstract:

- Why do you think this project is important? Please explain the significance of this Project in brief.
- In your point of view what are the important aspects that should be covered in the project?
- Objective(s): In your view, please explain the main objectives of the project.
- Methodology: Give a brief outline of the application development process.
- Had this project been done before? Are there any similar applications available today?
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- **Note:** Please deliver this abstract early to ensure that your Project has been approved by the department's projects committee. **Registration will not be done without this approval.**

Project's Abstract:

The delivery personnel usually face difficulties in finding customers' addresses accurately and correctly, resulting in time-consuming efforts for the deliveryman to find the right destination. Furthermore, recipients may not be available at home and they could not receive their parcel at the delivery time causing inconvenience for recipients and the delivery man. To try to solve those issues, this project aims to implement "Pick at Locker " where recipients could receive their parcels from public lockers at any time.

To manage all the project functionalities and properties; including holding and placing parcels into available lockers, verifying the correct PIN entry to open the locker, and processing payment. The Arduino Mega will be used as the main microcontroller.

In addition, this project aims to save both recipients and deliverymen time and reduce costs by optimizing routes, so recipients could collect their parcels from public lockers placed in a specific location by the delivery man. Furthermore, the project has positive environmental aspects by reducing carbon emissions.

The delivery personnel scans the barcode on the parcel, extracting the necessary information. Then send an SMS message to the customer, which includes the assigned PIN and locker number. Upon arrival, the customer enters their PIN and proceeds to make the payment for the parcel. If all details are correct and the payment is done, the locker will open, allowing the customer to retrieve their package. Afterward, it is crucial for the customer to ensure that the locker is securely closed.

After conducting research, it has been found that similar concepts have been implemented in various foreign countries. However, certain enhancements are required. In addition, since this idea has been executed previously, a novel of features and improvements will be incorporated to enhance its functionality.