I/O MART

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ABSTRACT / MOTIVATION

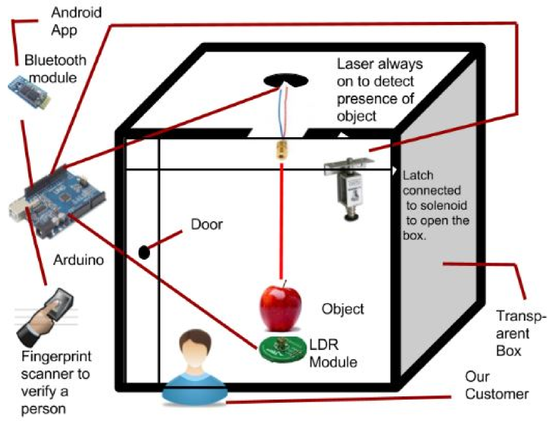
One of the few problems faced by the common people in their day-to-day lives is standing in long checkout queues for shopping and waiting for billing of each item. The recent demonetization only added to the madness where people couldn't buy daily groceries. Hence, we present our digital solution to solve this critical problem.

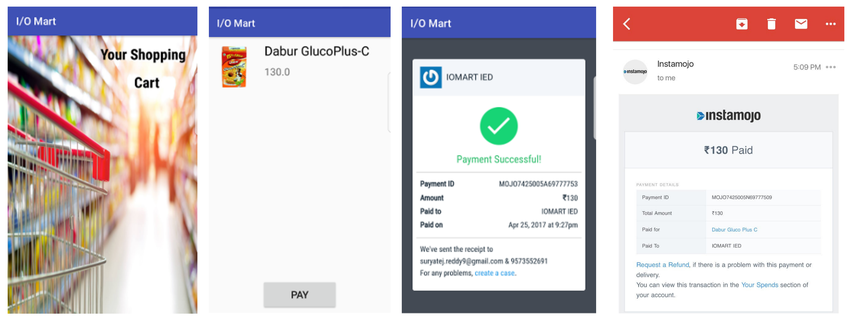
SOLUTION

The initial part of our project focuses on solving the first problem by digitizing the process of shopping and eliminating checkout counters from the shopping scenario. This idea goes hand-in-hand with the ongoing Digital India Movement in the country. The second part of our project focuses on building an Android Application to automate this process and make E-Wallet transactions as and when the shopping is completed. This aims at solving the second problem of the cash crunch due to demonetization.

DETAILED IMPLEMENTATION

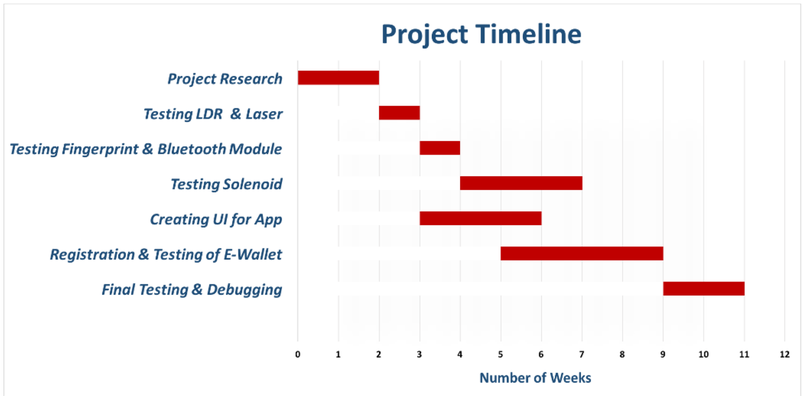
I/O Mart relies on Sensor Fusion to decide whether a product was selected or not. Our special application is required for shopping . It is connected to an E-Wallet service you need to be registered to in order to complete your payment, thereby avoiding the need of cash and digitizing the whole process.



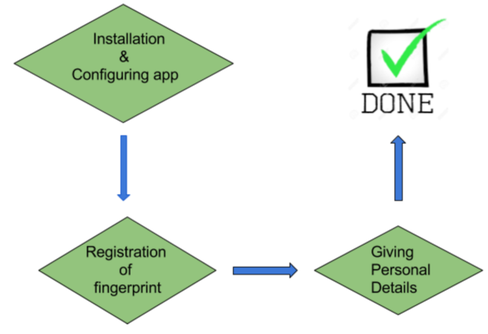


A customer walks in the store and opens the Application. He validates himself using the **Fingerprint Scanner**. On verification, **Solenoid** retracts, door opens and user can pick up the product. The **Laser and LDR Module** detect if the product is picked. If taken, it appears on the customer's application. This communication between Sensors and Android Application takes place via **Bluetooth (HC-05) Module** connected to **Arduino** which handles all the processing. The solenoid releases when the distance of the door is optimum, as detected by the **Ultrasonic sensor**. Then the customer is directed towards payment.

PROJECT TIME-LINE



REGISTRATION PROCESS



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