Bahria University
Discovering Knowledge

FINAL YEAR PROJECT REPORT

CURRENCY EXCHANGE MACHINE

In fulfillment of the requirement
For degree of
BCE (COMPUTER ENGINEERING)

By

M.SABIH SHAHZAD GHAURI 35528 BCE
FARAZ ELAHI 31203 BCE
SYED MUHAMMAD UZAIR 35538 BCE

SUPERVISED BY

ENGR : HUMA TABASSUM
BAHRIA UNIVERSITY (KARACHI CAMPUS)

Spring 2017

Acknowledgements

First of all, we would like to thank Allah. This work is dedicated to our dear parents, the most loving in this world, and then to our supervisor Engr: Huma Tabassum for her generous guidance, help, and useful suggestions. We express our sincere gratitude towards our supervisor Engr. Huma Tabassum, for her stimulating guidance, continuous encouragement and supervision throughout the project work.

We also wish to extend our gratefulness to Engr.Nabiha Faisal (Manager PMO) and the entire PMO team for their constructive suggestions to improve the quality of our project work.

We want to thank all our teachers and supervisor; without their help this work would not have been possible.

.

Abstract

The currency exchange machine is used to convert one currency to three different currency. It is used for currency conversion. There are approximately around 200+ currencies used in different countries around the world. It convert Pakistani currency to Omani Riyal, Dollar and Pound. The machine provides change of currency to its user or if needed exchange the currency to other currency options. When the customer enter the currency through insertion module .The machine check the currency condition. The software used for interface that we are proposing in our project is Matlab that is used for various currencies such as Omani Riyal, Dollar and Pound. (We are using three currencies in our project). Many times, currency notes are blurry or damaged; many of them have complex designs to enhance security as blurry or damaged. All the currencies have different security features, so we need to design one efficient algorithm to detect all three with one algorithm. It is a tough job for us to make one simple algorithm for that. But we need algorithm that could be used for recognition for the available currencies. We then check for real or fake, if the currency is real then the currency move forward and if it is fake then the currency roll back from insertion module. This machine can be used at hotels, malls, Air ports etc. reducing time and cost. The model of currency machine is Implemented using Arduino. For image capturing camera is used with the module for currency image. Our system is based on image processing and makes the process easy and user friendly to recognize Currencies. Our system help in currency recognition and currency conversion to reduce the human power to recognize the amount of currency and convert it into the other currencies without human supervision. The software interface that we are using to propose is used for various currencies. We are using three currencies (Omani Riyal, Dollar, and Pound).It is very important to select the right features and algorithm for this purpose. Our main objective is to design an easy but efficient algorithm that would be useful for maximum number of currencies, because all currencies have different security features, it is tough to design, one algorithm that could be used for recognition of currencies.

Keywords: Currency exchange machine, Graphic user interface, Arduino, Access money, Easy transition. Demand for Cash, Image Processing

Table of contents