Survey on Note to Coin Converter

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Abstract - In our daily life we faces many problems related coin changes at various public places like bus station , railway station , mall, park and even rural areas. The main motive of designing "note to coin converter". Is to developed efficient and simple machine which will fulfill need of coins, so that people will not face problem related to change of coins. In this paper we studied different method to identify the value of note. And to find equivalent coins of that note.

Keywords - DIP, Coin, Indian currency, Raspberry pi.

1. INTRODUCTION - In the previous year there are lots of problem faced by people to get coins alternate of notes, but due to demonetization. For getting alternate of note people have to wait in queue for an hours. Even waiting for an hour in queue people cannot get the required money. Dues to shortage of money in the market. In public placed there are Various problem faced by people for getting coins alternate of notes such as glossary shops, bus station, railway station, malls. In rural area people more faced problem related to coins due to their poor finical condition. They importance of coin is more than note in various places. So by referring previous history of not getting coins alternate of notes. By understanding people's problem it is necessary to design a technique to get coin of note. To solve this problem we studied the system which can give change (coin) of equivalent value of note. In this system note is placed at note placing unit and it checked value of note. After checking value of note & system gives coins in alternate of notes. There are lot of technique to check Indian currency. This technique are texture based, pattern based, watermarking based, micro lettering and color based etc. The most preferable technique among all technique is color based recognition. For checking value of note.

1.1 Motivation

The need of Coin has been increased nowadays. We required coins at various public places regularly in our daily lives Places Such As Railway Station, Bus Stand, Petrol Pumps, & Even in Rural areas. Coins are extensively used. use of Coin has been increased more instead of note in various Places thus a System Which Will give us Coin in exchange of note using image Processing will Turn out to be Very Useful.
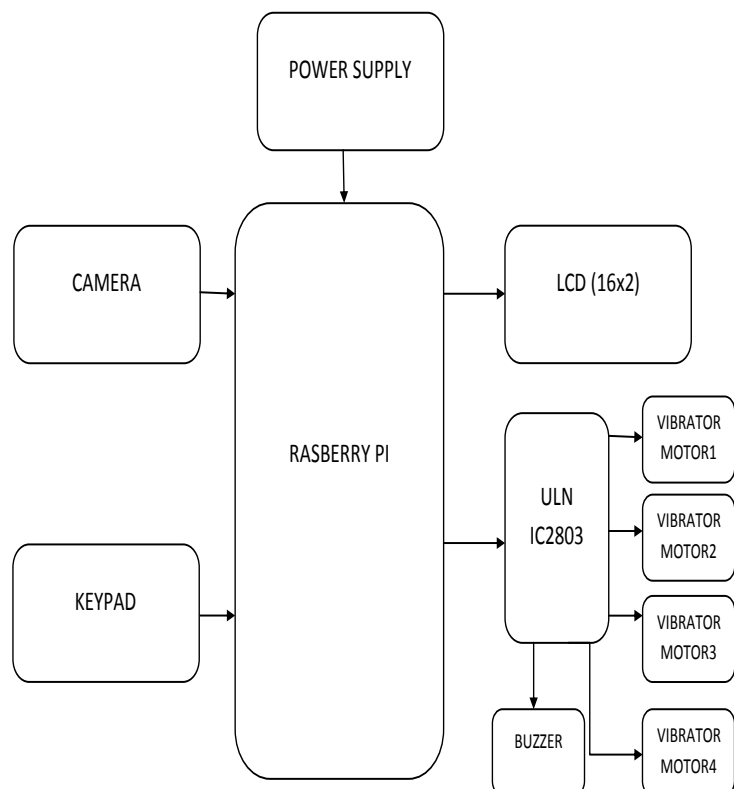
1.2 Methodology

Euisun Choi, Jongseok Lee and Joonhyun Yoon, have discussed about an approach to feature extraction for bank note classification by exploiting the potential of wavelet transform. In the proposed method, high spatial frequency coefficients taken from the wavelet domain are examined to extract features [1].
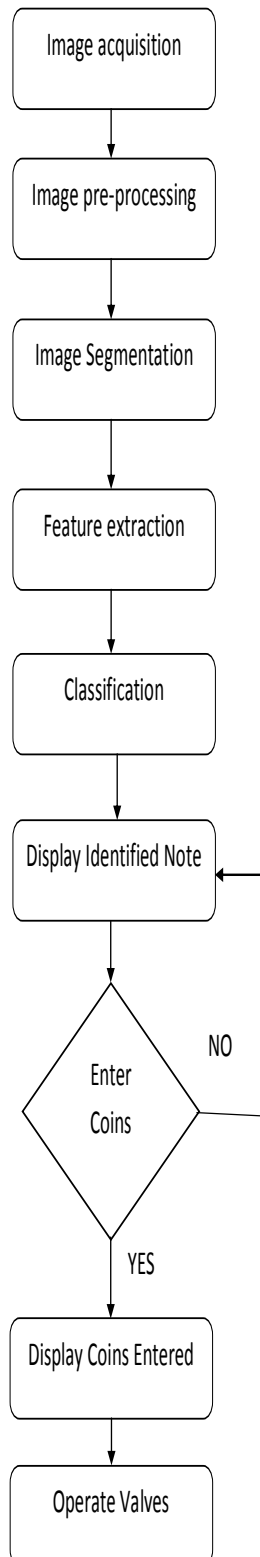
Parminder Singh Reel, Gopal Krishan, Smarti Kotwal, have discussed about the successful approach for currency recognition depends upon feature extraction of that currency image. Also represents the heuristic analysis of characters and digits of serial number of Indian currency notes to recognition of currency notes. To recognize a character from a given currency image, there is a need to extract feature descriptors of such image [3].

2. SYSTEM DEVOLOPMENT-

2.1 BLOCK DIAGRAM-

2.2 FLOW CHART-

```
┌─────────────────────────┐
│    Image acquisition    │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│  Image pre-processing   │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│   Image Segmentation    │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│   Feature extraction    │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│     Classification      │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│  Display Identified Note │◄───┐
└─────────────────────────┘    │
             │                 │ NO
             ▼                 │
          ╱─────╲              │
         ╱ Enter ╲─────────────┘
         ╲ Coins ╱
          ╲─────╱
             │ YES
             ▼
┌─────────────────────────┐
│  Display Coins Entered  │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│     Operate Valves      │
└─────────────────────────┘
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2.3 COMPONENTS-

Software Requirement

1. Raspberry PI.

2. Raspberry PI Studio.

Hardware Requirement

1. Note Placing Unit

2. Coin Dispenser Unit

3. Camera

4. Buzzer

5. LCD

6. Power Supply

7. Key pad

8. Vibrator Motor

9 Adapter

10. ULN IC 2803

3. CONCLUSIONS- The basic idea of developing a machine to exchange currency coins instead of notes is very adaptive in implementation. It's a fully automated system. This system can be placed at railway stations, bus stations, malls and parks, etc. Further it may be developed to exchange 100rupee, 500 rupee notes with various Indian currency coins, such as 10 rupees coins which will be available henceforth.

4. ACKNOWLEDGMENT-

5. REFERENCE-

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