

OMR EVALUATION USING ANDROID PHONE

INTRODUCTION

An OMR is ideal for the rapid and accurate scoring of multiple-choice questions (MCQs). OMR assessment not only allows OMR-captured results to be exported to existing databases, to spreadsheets or to statistical analysis packages, but also provides for analysis of whole tests, individual questions and student results. This project aims to develop OMR software for implementation on android devices for PSC Coaching centres. It also aims to help them check/verify mathematical problems. It uses the camera of the mobile phone or laptop to take the pictures of mathematical equation in any format (handwritten or printed). Pre-processing is involved which is to remove the noise and extract the portion in which the equation is written. Characters and symbols are recognized using OCR. After that, the equation is extracted in the form of string so that it can be solved. Operators and operands are separated and mathematical rules will be applied to extract the roots of the equations. After returning the roots, it will show step wise calculating of the given equation to ensure learning of the user. So for the detection, OpenCV haar-cascade method is being used. This app helps a staff to capture and score responses of the answer sheets with accuracy and efficiency. This can be helpful for majority of staffs or coaching centres managing PSC mock exams or materials.

OBJECTIVES

- This application can be implemented at institute level, which will bring a tremendous change in the trend of Educational system record management.
- Another main objective of this application is to make the evaluation process more speedy, more accurate and cost efficiency.

EXISTING SYSTEM

- Image-based low costs are capable of processing thin papers and low-printing precision answer sheets.
- The existing system makes use of OMR scanners which are expensive.
- It won't work when the image is significantly damaged.

Disadvantages

- Time consuming
- Less accurate

PROPOSED SYSTEM

- In the proposed system, we are proposing an android app that can act as a OMR scanner to access MCQ (multiple choice question) tests or mathematical equations.
- The proposed system makes use of Neural Network algorithm for detection which has a higher degree of accuracy.

Advantages

- More accurate.
- Cost efficient.

MODULES

Functions of Admin

- Login
- Staff management
- Question management
- View registered user
- View feedback
- View complaints and send reply
- Manage career
- Winner list updation
- View exam result
- Sent notification to staff,students

Functions of Staffs

- Login
- View profile
- Exam management
- Exam question management
- Omr scanner
- View exam results
- View students
- Chat with students
- Materials management
- Change password
- View notification from admin

Functions of Students

- Register
- Login
- View Profile
- Edit profile
- Exam notification

- View marks
- Send feedback
- Send Complaints and view reply
- View previous materials download
- Chat with staff
- View career notification
- View notification from admin

Functions of Public

- View winners list

Scanner

- Scan the OMR sheet
- Evaluate score
- Detect answers for scanned mathematical equations

SYSTEM SPECIFICATION

Hardware and software requirements for the installation and smooth functioning of this project could be configured based on the requirements needed by the component of the operating environment that works as front-end system here we suggest minimum configuration for the both hardware and software components.

Working off with this software is requirements concrete on system environments. It includes two phases

- Hardware requirements
- Software requirements

HARDWARE REQUIREMENTS

- INPUT DEVICE :MOUSE,KEYBOARD
- OUTPUT DEVICE :MONITOR
- MEMORY :4 GB RAM(MINIMUM)
- PROCESSOR :PENTIUM 4 above

SOFTWARE REQUIREMENTS

- ❖ Operating system : Windows 7 Ultimate or above.
- ❖ Coding Language : Java/PYTHON/.NET
- ❖ Data Base : Mysql/sqlserver2008