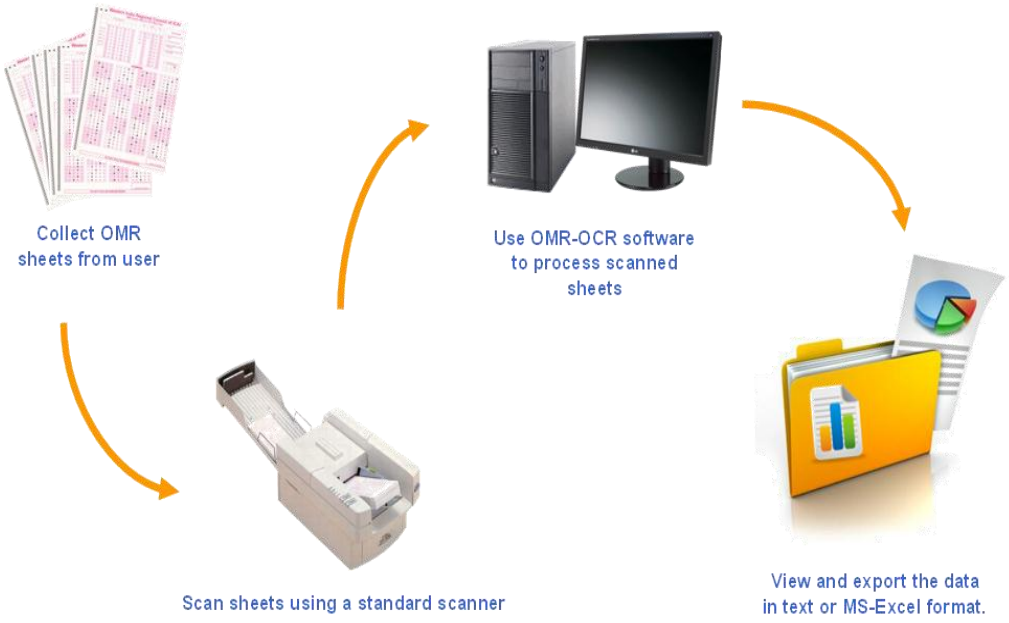
OMR OCR software is a smart application based on Optical Character Recognition (OCR) technology to recognize optical marks (checkmarks). The application offers a user with a swift, accurate and flexible solution for processing of OMR based sheets as compared to hardware based tools like image scanners. Typical applications of OMR technology include the processing of questionnaires, ballots, educational tests and reporting, and ordering sheets, where the documents to be processed are form-like and filled in by hand by respondents.

OMR OCR Software uses scanned copy of OMR sheet using any standard scanner and provides 100% accurate result and export data into Text and Excel formats. It is not scanner or design specific. Rather, it supports any design of OMR sheet and any model of flatbed or ADF scanner.

OMR OCR Software is based on KritiKal's proprietary OCR Engine Platform. The underlying OCR engine is modified to suit the requirements of OMR sheets pattern for capturing the user input as marked in the sheets.

Work-Flow



Applications

- Educational tests and reporting
- Ballots
- Community surveys
- Consumer surveys
- Evaluations/Feedback
- Data compilation
- Time sheets/Inventory counts
- Membership subscription forms
- Lotteries/Voting
- Geo-coding (e.g. postal codes)
- Mortgage loan, Banking and Insurance Applications

Features and benefit of OMR OCR System *(Including planned updates)*

- Allows parameters like Question Booklet series number, Answer sheet number, Registration number, Centre code etc to be darkened on the answer sheet.
- Supports high speed ADF scanner to give a satisfied output with more than 2500 pages per hour.
- Supports more than one correct answer.
- Supports result publication online, off-line, through directed e-mail and directed SMS to respective candidates.
- Supports printing of rank cards, mark-sheets, progress reports, analysis reports and charts etc.

OCR OMR – Case Study for an organization providing OMR solutions

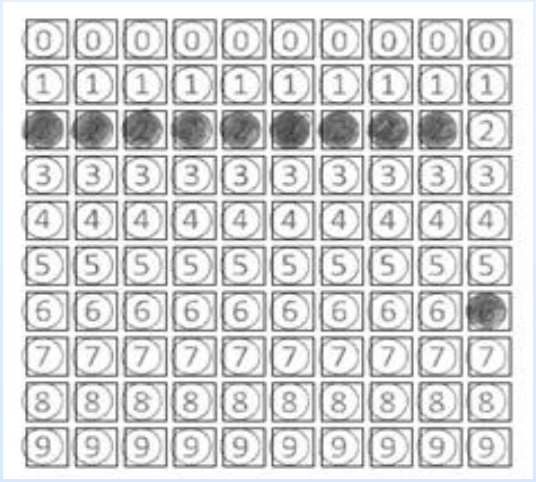
Objective: Automate and speed-up the process of capturing candidate's response from OCR-OMR sheets

Project Scope:

1. Design a form and PC based solution to capture Candidate's information (OCR format) and answers to Questions in OMR format.
2. Achieve more than 99% accuracy for OMR fields, store the captured information tagged with a unique ID in database for future validation.

KritiKal's Solution:

1. Designed a two page form
   - Capture candidate's information (Name, Place, Town, Age etc.) – OCR field
   - Mark response to the questions – OMR Field
2. Automate the process of scanning paper document.
3. Register the corresponding images for Rotation and Skew correction.
4. Localize the OCR and OMR fields.
5. Use OCR Engine to read Candidate's information and OMR Engine to read responses of questions.
6. Store the results tagged with a unique id in database.



Challenges:

1. Handling variety in hand written fonts.
2. Handling background of the form in black and white image. Generally "Color Drop Out" technique is used to remove background color of colored form. Since, we were getting black and white form to save cost we had to detect and remove background information programmatic way.
3. Handling skew and noise generated by scanner.