

Annexure B (OMR)

Kairee System OMR SHEET READER SOFTWARE

FEATURES & SPECIFICATIONS



Please Note about this document:

Features mentioned in this document are super set of all features COLOUR only or referred to in a soft copy. spread over all modules and versions that include Standard/ • **Optional features** or features that are Professional/ Server variants of the Software. Some features may available as a part of certain Combo or not essentially be a part of the version and module of the Software higher versions have been (#) **marked.** under procurement.

- This document should ideally be printed in

Introduction of Addmen OMR System

How the OMR Reader Solution Works?

The OMR process has 3 main process components:

1. OMR Sheet Design & Print
2. Scanning of OMR Sheet
3. Reading of scanned Sheet to get results

After filling, the OMR sheets are scanned to a folder in PC using any scanner. OMR Software reads the entire folder at a very high speed and prepares result in a variety of ready to print formats or exports to Excel, PDF or other database formats.

Addmen OMR Solution Overview



1. The Addmen OMR Software is a proprietary software product and registered Trademark of M/s Admen MultiStudios. The business firm has the ownership of the source code of the software.
2. Software has two variants: **Standard** and **Professional**.
3. Software can be deployed as **Standalone** (Desktop/ LAN) or **Online** (Server-Client) systems.
4. Software has a multi-lingual interface.

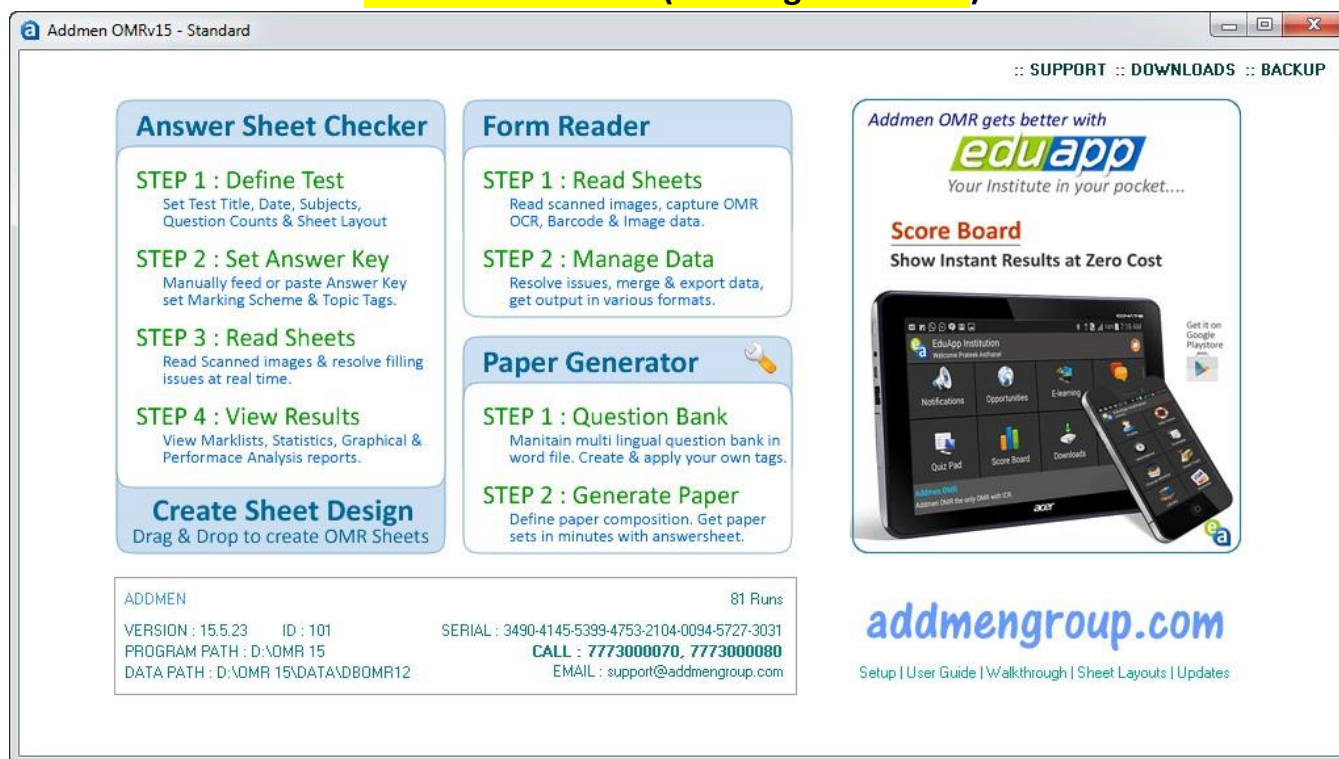
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5. **Backend Database** : Standard version : **MS Access**; Professional version : **MS SQL Express**.
6. Addmen OMR is a part module of **Addmen Integrated Assessment Suite**, which comprises of following modules:
 - a. **Question Paper Generator** (Questions with diagram, formula, equation, images etc. in Word/Excel)
 - b. **OMR Software** (Capable of reading OMR, OCR, ICR, Barcode, Lithocode, Qcode and Photo capture)
 - c. **Online Test Software** (Computer based Test system available as Standalone or Cloud versions)
 - d. **EduApplet** (The Android extension for OMR, Quiz Pad, Online Test and Online Result modules)
 - e. **Online Application System** (for pre-exam data management and hall ticket generation)
 - f. **Digital Evaluation System** (for manual checking & scoring of Answer sheet image on internet)

Standard Interface (Running version 15)

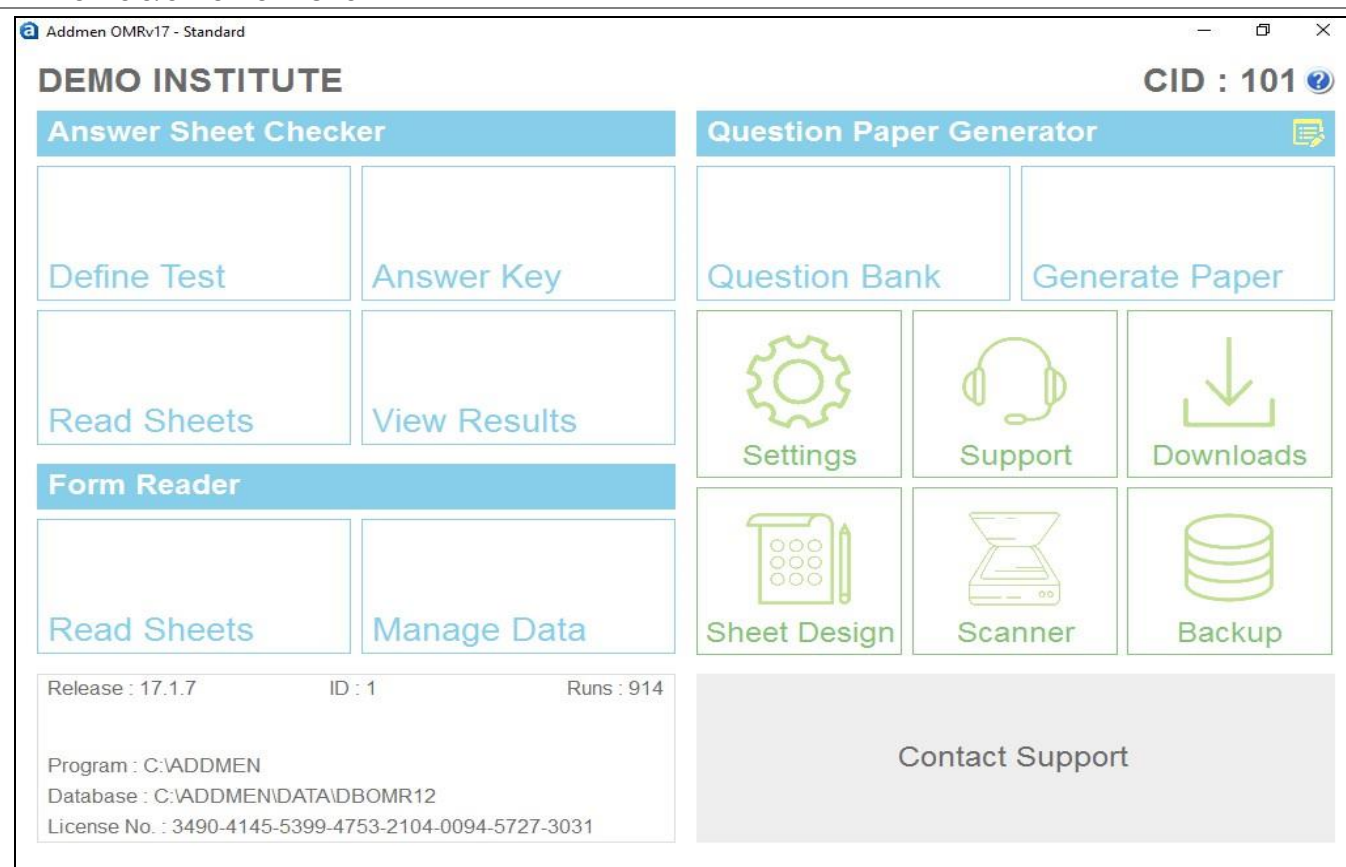


Multi-Lingual Interface (New version 17)

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Various Combinations of Modules and Features of OMR System

Code	Base Modules / Combo Description	Remark
SA	OMR Answer Sheet Checker Useful where primary objective is MCQ Test scoring, it provides various merit lists and basic graphs, charts, analysis etc. Reads OMR blocks like Roll no, Set No. and Question that are relevant to test process. It does not capture photo, signature, name, phone, dob etc. Access backend suitable for not very high volumes.	

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SB	OMR Form Reader Useful where primary objective is data extraction from Application Forms, Feedback forms, Instant I-Card , Attendance and Elections, it simply provides data in Excel as it is without applying any post reading logic, because each data collection form is different and there is no general processing pattern or procedure like tests. Reads OMR blocks, Barcode and capture Photo. Add this module if you also want to collect data from additional fields on test answer sheet.	
SAB	Combo of Standard OMR Answer Sheet Checker + Form Reader with Access backend	
PA/PB	Professional OMR Reader with SQL Backend Same in utility as OMR form Reader but needed where you have requirements to fast process high volumes or read multiple folders simultaneously and has some added features required for high process users. It collects data into SQL backend instead of Access. Professional version is necessary for server connectivity feature.	
PAB	Combo of Professional OMR Answer Sheet Checker + Form Reader with SQL backend	
SD	Standard OMR Sheet Designer Integrated and FREE with above modules Used for Design of new OMR sheet	

Code	Addon Modules/Features Description	Remark
+PC	ICR & OCR Reader As a technology OCR (for pre-printed numbers) and ICR (for handwritten) are not 100% accurate like OMR so they are only used as supportive tools to help in data collection. Manual interpretation and correction is required in some cases. Applicable for English language only.	
+PD	Advanced OMR Sheet Designer Used for Design of new sheet and calibration of existing/pre-printed sheet	
+PE	Variable Data Printing (VDP) Used for printing variable data using input given in Excel or Access. Used for Generation of Lithocode and Printing of Text, OCR or Barcode fields. Creation of single sheet or multi-page merged PDF. Selective printing of a series.	

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+PF	Server Connectivity Forms or Tests created at HO/server can be used by all branches. Branch can read the sheets and upload data to server. Login based access. Two options for the branch terminal to work independently or bound to the server. User will need to have SQL server with Static IP at your HO	
+PG	QCode Reader/Lithocode Reader (price per feature for either feature)	
+RES	Online Score Board (Result on Website) Interface is added to website where Student login to see result chart of all his tests and sheet and graphical analysis reports. Admin interface facilitates generation of some typical graphical reports that involve enormous calculations. Besides individual Student reports, it also provides group comparison and question wise analysis reports. Cloud or local server with IIS and SQL is required to host the module.	
+SMS	Result on Bulk SMS (Free Facility) Send SMS for Test Schedule, Results and any other purpose using excel sheet, SMS credits must be purchased additionally.	

Code	More Assessment Modules / Combo Description	Remark
SC	Question Paper Generator Useful for handling large Question Banks and quick & easy creation of MCQ and nonMCQ (subjective) Question papers and for shuffling to make multiple sets of question paper. Read : B(QPG)-Addmen-QPG-Features.pdf	
CBT	Online Test System (Computer Based Test CBT) Upload and administer your own tests, schedule and map them to branches and groups. Test allocation to candidates by default group, or package or by counts or specific tests. Read : B(CBT)-Online-Test-and-Feedback-Software-Features.pdf	

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APP	Android App Standard App with your name and logo with selective features out of Online Test, Results, Video Lectures, Queries, Notifications and opportunities, Payment Gateway depending upon modules Read : DE(APP)-Price-and-Terms.pdf	
IAS	Integrated Assessment Suite (Best Price – All Inclusive Combo) Question Paper Generator+ Online Question Bank+ Computer Based Test (Online Test)+ OMR Checker+ Manual Scores+ Online Score Board (Result) + Android APP	

Sample Sheet Design with **OMR, OCR, ICR, Barcode, Image, Lithocode** and Variable Printing.

All type of fields can be read in single pass. Parallel Reading at Multiple Threshold in single Pass.

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Kairee System OMR SHEET READER SOFTWARE

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Your Institute Name & Logo

CANDIDATE INFORMATION

Sheet Serial No.

12055

Print No.



* 5 6 7 2 1 *

Candidate Name (In BLOCK Letters)

A N G E L

A	A	A	A	A	A	A	A	A	A
B	B	B	B	B	B	B	B	B	B
C	C	C	C	C	C	C	C	C	C
D	D	D	D	D	D	D	D	D	D
E	E	E	E	E	E	E	E	E	E
F	F	F	F	F	F	F	F	F	F
G	G	G	G	G	G	G	G	G	G
H	H	H	H	H	H	H	H	H	H
I	I	I	I	I	I	I	I	I	I
J	J	J	J	J	J	J	J	J	J
K	K	K	K	K	K	K	K	K	K
L	L	L	L	L	L	L	L	L	L
M	M	M	M	M	M	M	M	M	M
N	N	N	N	N	N	N	N	N	N
O	O	O	O	O	O	O	O	O	O
P	P	P	P	P	P	P	P	P	P
Q	Q	Q	Q	Q	Q	Q	Q	Q	Q
R	R	R	R	R	R	R	R	R	R
S	S	S	S	S	S	S	S	S	S
T	T	T	T	T	T	T	T	T	T
U	U	U	U	U	U	U	U	U	U
V	V	V	V	V	V	V	V	V	V
W	W	W	W	W	W	W	W	W	W
X	X	X	X	X	X	X	X	X	X
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Z	Z	Z	Z	Z	Z	Z	Z	Z	Z
0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9

Roll No.

Exam Date

Enter Subject Code

1

1

2


Re-enter Subject Co

OMR ANSWER SHEET


INSTRUCTIONS FOR FILLING THE SHEET

- This sheet should not be folded or crushed.
- Use only blue/black ball point pen to fill the circles.
- Use of pencil is strictly prohibited.
- Circles should be darkened completely and properly.
- Cutting and erasing on this sheet is not allowed.
- Do not use any stray marks on the sheet.
- Do not use marker or white fluid to hide the mark.

WRONG METHODS



CORRECT METHOD



Test Paper Set

A

☒

B


☐

	A	B	C	D		A	B	C	D
1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	26	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	27	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	28	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	29	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	30	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	31	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	32	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	33	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	34	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	35	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	36	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	37	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	38	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	39	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	40	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	41	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	42	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	43	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	44	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	45	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	46	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	47	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	48	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	49	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	50	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Sheet No.

12055

Print No.



* 5 6 7 2 1 *

Invigilator Signature

Candidate Signature

School: GANDHI VIDYALAYA, PARBHANI

Exam Center: GANDHI VIDYALAYA, PARBHANI

Subject Group: ENGLISH

Examination: 01-Jun-2016

You must add Form Reader (SB) with OMR Answer Sheet

Preprinted number
Print: VDP (PE)
Read: OCR (PC)

Handwritten Name
Read: ICR(PC)

Name as OMR
Read: OMR(SB)

Unique ID Field
Read: All OMR

Handwritten Numbers
Read: ICR (PC)

Additional Info fields
Read: OMR(SB)

Auto Sort Field
Read: All OMR

Multi Choice Questions
Read: OMR (SA)

Lithocode
Print: VDP (PE)
Read : OMR (PG)

Barcode
Print: VDP (PE)

Barcode
Read: All OMR

Annexure B (OMR)

Kairee System OMR SHEET READER SOFTWARE

FEATURES & SPECIFICATIONS

FEATURES AND SPECIFICATIONS OMR Sheet Design, Calibration & Printing

Design of New Sheet

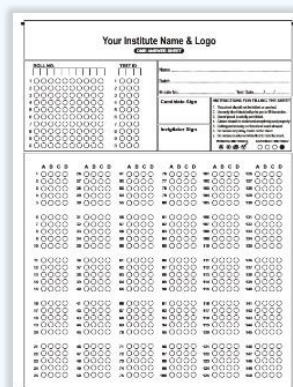
7. #Sheets can contain **OMR, OCR, ICR, Barcode, Lithocode** and **Image** blocks.
8. Such sheets can be designed in which all type of blocks are read simultaneously in single pass.
9. It has a convenient inbuilt visual interface for sheet design that allows 'drag-n-drop' placement of OMR blocks. User can learn to design and edit sheets by himself.
10. New sheets can be designed with flexibility according to requirement.
11. There is no limit on the count of designs that you create in the software.
12. Manual calibration is not required for new sheet designs created in the software. Automatic calibration at time of design is accurate and saves lot of time & effort.
13. Ready selectable presets templates available in standard sizes like A4, Half A4, B5 etc. with preset grid and span to facilitate new sheet design.
14. User can duplicate an existing design for an ease start of new design.
15. It has predefined matrix based creation and calibration of OMR sheets.
16. It is possible to design OMR sheets ranging from Stamp size to A3.
17. It is possible to alter the grid i.e. distance between the OMR bubbles.
18. It is possible to change the bubble size & shape to circle/ellipse/box etc.
19. OMR sheets layout can be **fully designed inside the software with OMR components, Text Labels, Logo image** and other design components.
20. It is possible to set OUTPUT values for the READ values.
21. It is possible to set logical behavior on fields like **MERGE** data of 2 or more fields in desired sequence; to **ADD** values of fields; to **COMPARE** values of 2 fields; to **REPLACE** specific value when empty or not empty...etc.
22. Software **exports the sheets in Word and Open Source formats like PDF & SVG which can be edited in various softwares like Corel Draw, Adobe**

Illustrator, Inkscape etc for adding Text Titles & Instructions in any language and Logo images and other design elements.

Calibration of Pre-Printed Sheet/ Advance Design

23. # Externally designed/pre-printed sheets that are suitable and fulfill requirements about grid and index points can be calibrated in software.
24. # Allows to trace a pre-printed sheet by using its image as background.
25. # Allows grid-free placement of OMR blocks by manual movement or by alteration of coordinates at the time of sheet design.

No need to purchase OMR sheets. You can design your own sheets. Addmen OMR Software has inbuilt Design module.



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Many ready-to-use OMR designs are available in the software. Simply add institute logo and name and start using.	B/w print is sufficient. Color printing is not essential for most types of sheets.
New designs can be made in any size. Two sided (duplex) sheets can be also be designed and processed.	Normal white paper is sufficient. Use of thick paper not essential.
Print your own OMR sheets using Laser printouts or Copier or Offset Printing.	

- 26. # Allows to place blocks outside the indexed area in all directions this is helpful in sheet calibration.
- 27. # Can be customized to attend sheets with misaligned rows & columns or with improper or insufficient index points that do not form a rectangle.
- 28. # Allows to use layouts predesigned in Word Documents in background to be used for placement guidelines to create new OMR sheet design.

Sheet Printing and Variable Data Printing

- 29. Sheets can be exported in Black & White or Color formats with or without text labels inside bubbles and with or without timeline.
- 30. New Sheet design can be printed using a regular B/w laser printer on normal white paper. Copies from good quality copiers & photocopy machines and offset prints from local press can also be used as OMR Sheets.

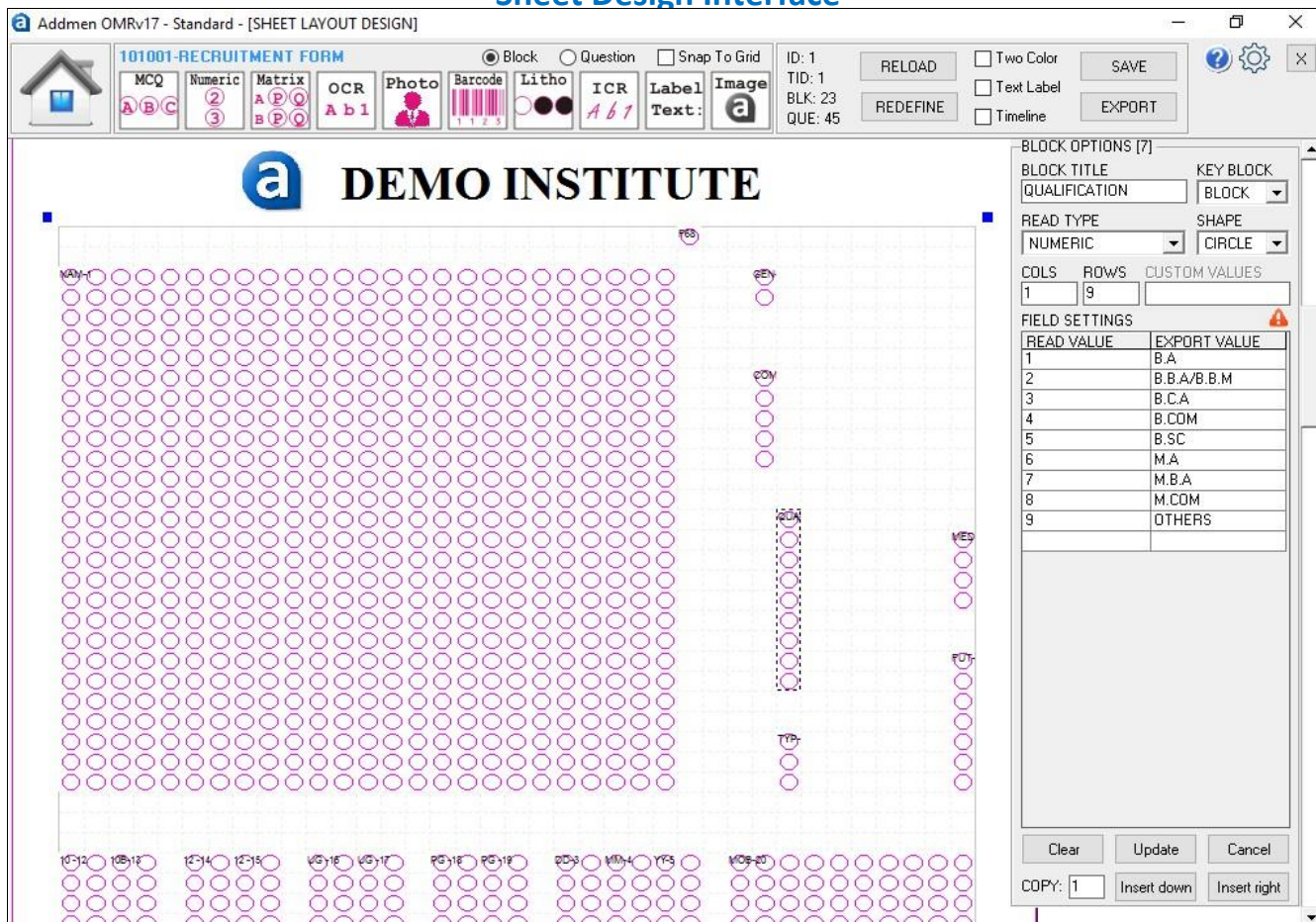
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31. Any OMR sheet designed using the software can be printed as black on white paper and gives accurate results. There is no requirement of 2 color printing if full bubble filling is instructed. Color sheets may be required only if the size of the expected mark to be detected is comparably small or thin or if ICR is used.
32. # Scalable **Variable Data Printing** facility for printing sheets with unique sheet numbers or barcodes or any other several fields of candidate information and to create PDF files.
33. # Possibility to sequentially merge several OMR designs for printing of uniquely numbered duplex OMR Sheets or multipage forms/questionnaires.
34. # Possibility to create single merged PDF for entire folder or create separate PDF for each sub folder.

Sheet Design Interface



The screenshot displays the 'Sheet Design Interface' of the Kairee System OMR SHEET READER SOFTWARE. The main window is titled 'Addmen OMRv17 - Standard - [SHEET LAYOUT DESIGN]'. It features a toolbar with various design tools: MCQ, Numeric, Matrix, OCR, Photo, Barcode, Litho, ICR, Label, and Image. The central canvas shows a grid of bubbles for an OMR sheet, with the text 'DEMO INSTITUTE' at the top. The right-hand panel contains settings for the sheet design, including 'BLOCK OPTIONS' and 'FIELD SETTINGS'.

BLOCK OPTIONS [7]

BLOCK TITLE	KEY BLOCK
QUALIFICATION	BLOCK
READ TYPE	SHAPE
NUMERIC	CIRCLE
COLS	ROWS
1	9
CUSTOM VALUES	

FIELD SETTINGS

READ VALUE	EXPORT VALUE
1	B.A
2	B.B.A/B.B.M
3	B.C.A
4	B.COM
5	B.SC
6	M.A
7	M.B.A
8	M.COM
9	OTHERS

Buttons at the bottom right: Clear, Update, Cancel, COPY: 1, Insert down, Insert right.

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OMR Sheet Scanning and Reading

Scanning of OMR Sheets

35. It accepts files scanned at 96/100 dpi or higher in B/W (1-Bit), greyscale or color modes and saved in JPG, BMP or TIFF formats.
36. Images scanned at higher resolutions can be converted into 100 dpi for faster processing and lesser size using inbuilt utility.
37. No requirement of special OMR Scanner or costly OMR machines.
38. Use any regular scanner of any brand, any model of Flatbed or Automatic (ADF) image scanner.
39. Scanner and OMR Software are not linked. There is no integration of OMR Software required with the scanner. Scanning can be done on any PC even if OMR software is not installed.
40. There is no compatibility issue and no specific recommended model. No "compatibility" is required.
41. Any scanner or even multiple scanners can also be used to scan for the same project.
42. Role of Scanner is simply to scan images at lowest DPI and put in a PC folder which the OMR software reads later after scanning.
43. Scanned sheets can be transported from different locations via Email / FTP or Pen drive / CD media to be evaluated at the software location.
44. Low price scanner model without color dropping feature can also be used even for 2 color sheets.
45. **Multipage Forms** can be input as multipage TIFF files. Software Automatically reads multiple pages with relevant sheet definition and presents collated data of all pages into one record.
46. In case of single page forms scanned as TIFF files, Single page TIFF files are required. Images scanned in multipage TIFF formats can be converted to single page TIFF using inbuilt utility.

No requirement of special OMR Scanner or costly OMR machine.



Work with any regular scanner, use any brand, any model of Flatbed or Automatic (ADF) image scanner.



If an ADF Scanner is used, the speed of scanning is increased manifold and the effort in placing each sheet one-by-one is minimized as you can put many (20-100) sheets in the scanner pocket.

Low price scanner models without color dropping feature can also be used even for colored sheets.

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Reading of Scanned images of OMR Sheets

- 47. It provides separate interface for OMR Answer Sheet Checking & OMR Survey and Form Reading. It also provides a combined interface for both functions in case of combo implementation.
- 48. Allows real-time reading of sheets during scanning. New scanned sheets are automatically and instantly detected and continuously read.
- 49. Can read sheet from all subfolders. Bulk renaming and handling of images in subfolders.
- 50. Can selectively read sheets with specific category/ issue prefix simultaneously in all subfolders.
- 51. Can read Duplex or Multipage Forms and present collated Data in single record for each form.
- 52. Sheet image can be saved in Database, along with data record (link is provided in output data).
- 53. Auto Rename, Auto copy with size conversion, Auto save as JPG, Auto Delete is possible, based on settings.
- 54. Can read sheets on Auto number sequence in case ID field is missing.
- 55. The software offers **single pass reading** of any or all the following fields:
 - a. **OMR – Optical Mark Recognition** detects black marks
 - b. **# OCR- Optical Character Recognition** (Any angle) for reading digitally pre-printed information in English script.
 - c. **# ICR- Intelligent Character Recognition** for reading **handwritten** information in English script with more than 90% accuracy.
 - d. **# Barcode-** All Standard formats (like Code 39, Code 128, 2 of 5, EAN8, EAN13, UPCA, UPCE CodeBar, PDF-417 etc...)(Any angle)
 - e. **# Lithocode** (16/32 digit Binary Sheet Code) for sheets pre-printed with Lithocode or Qcode
 - f. **# Images-** Sheet, Photo, Signature, comments and any other.
 - g. **# Qcode-** can be read

Candidates are free to use any blue / black ball pen or ink pen or dark HB pencil to fill the bubble.

OMR Software has settings to control the sensitivity for accepting or rejecting small marks or partially filled options.

Any sort of dirt, scratch or line outside the bubbles has no impact on the accuracy.

Even tilted, skewed or distorted scanned image of the OMR sheet are automatically corrected and read.

Image Handling and Enhancement Features

- 56. Inbuilt color dropping and contrast threshold adjustment.

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- 57. Allows rotation of OMR sheets.
- 58. Auto validation of skewed images with a higher degree of skew than permissible limit.
- 59. Helps to avoid rescanning by allowing manual placement of improperly printed/ scanned index points.
- 60. Allows change of Format JPG to TIFF, Multi-page TIFF to Single page TIFF and vice versa.
- 61. **It has the possibility to control response sensitivity and reads Full/partial circles and even tick marks with 100% accuracy** as per the sensitivity specified by the exam policy.
- 62. **The Software has the feature to Triple Parse the Sheet at 3 different thresholds in a single pass.** This feature serves as solution for the need of double scanning and double reading which is mostly required in case of OMR machines and other solutions.

Error and Exception Handling During Reading and Post Reading

- 63. It shows image reading progress with color markers on location of reading, successful capture, erroneous fill etc.
- 64. Read time alerts for specific filling conditions like multiple mark, over fill, blank filling etc.
- 65. Notifies any probable marks left because of threshold settings range but are large enough to be considered.
- 66. It notifies erroneous filling of candidate IDs for Blank ID, Multiple marked column, Duplicate ID, Invalid Length, Invalid ID not in list etc. and validate from the list of existing IDs.
- 67. Shows the duplicate image in case of duplicate or conflicting IDs for swapping.

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FEATURES & SPECIFICATIONS

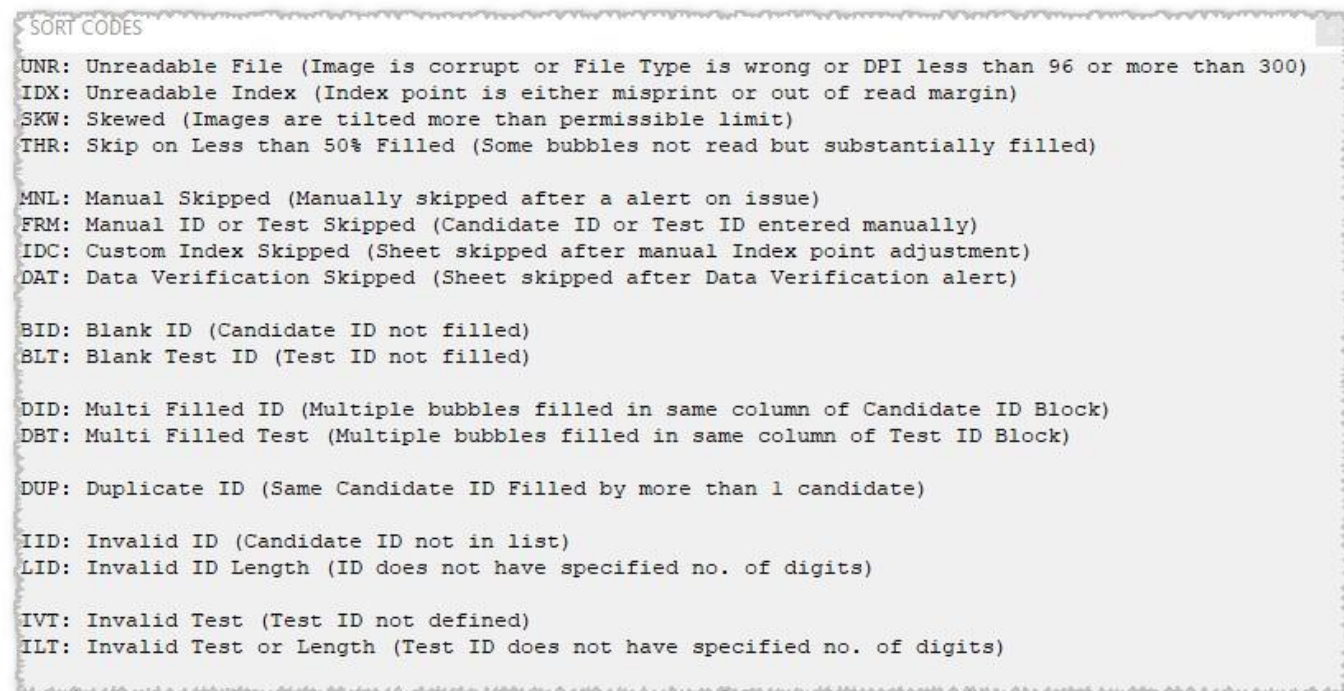
SETTINGS > OMR PREFERENCES PANEL		
ID	PARAMETER	VALUE
1	NUMERIC BLOCK [0=0-9;1=1-0]	1
5	RESPONSE THRESHOLD [5-100]	30
6	SKIP THRESHOLD (UPPER,LOWER) [0-100]	0,15
7	FORM ID LENGTH [0-50]	0
13	SORTER LENGTH [0-50]	0
21	READ MARGIN (TOP,BOTTOM,LEFT,RIGHT)	10,10,10,10
24	OCR READ ANGLE [0,90,270]	0
25	MAXIMUM ACCEPTABLE SKEW	10
30	STORE IMAGES[0=NO;1=DATABASE+FOLDER;2=FOLDER]	0
32	MULTIPAGE SHEETS SUFFIX [S1,S2]	A,B
33	INDEX POINT SIZE [WIDTH,HEIGHT]	7,7
36	ID REPLACE 1[0=OFF/COLUMN NO.VALUES=v1 v2...]	0
37	ID REPLACE 2[0=OFF/COLUMN NO.VALUES=v1 v2...]	0
38	ID REPLACE 3[0=OFF/COLUMN NO.VALUES=v1 v2...]	0
39	AUTO ID [0=NO;1=YES;2=ASK]	0
40	LEADING ZERO ID ON READ [0=NO;1=MARKED;2=ALWAYS]	0
42	COLOR TO B/W THRESHOLD [1-255]	128
43	READ INDICATOR [0=NO;1=YES;2=DESIGN]	0
47	DEFAULT SHEET DPI	100
51	SAVE SHEETS AS JPG AFTER READ [0=NO;1=YES]	0
53	AUTO ACCEPT SKEWED SHEETS [0=NO;1=YES]	0
55	DEFAULT READ MODE [0=AUTO;1=ALERT;2=MANUAL]	1
57	CONTINUOUS READING [0=NO;1=YES,PREFIX]	0
59	INDEX IN TIMELINE(LT,RT,LB,RB) [0=HORIZONTAL;1=VERTICAL]	0,0,0,0
60	SEARCH MARGIN[0=DEFAULT](LTx,y,RTx,y,LBx,y,RBx,y)	0,0,0,0,0,0,0,0
62	READ/SORT IN SUB FOLDERS [0=NO;1=YES,PFx1 PFx2...]	0
64	SORT PROBABLE MARKED [0=NO;1=SKIP SHEET;2=SHOW ALL;3=SHOW MARKED;4=TAG BLOCK]	0
65	SORT MULTIPLE MARKED [0=NO;1=SKIP SHEET;2=SHOW ALL;3=SHOW MARKED;4=TAG NUMERIC]	0
74	MULTI PAGE FORM SHEET IDS[0=NO;SID1,SID2,...]	0
78	CHILD SHEETS AND BLOCKS [0=NO;SHD1,BID FROM-BID TO;SHD2,BID FROM-BID TO,...]	0

Screenshot of Few Settings –Readtime Behaviour, Prompts and Actions, Exception Handling etc.

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Screenshot of Error Codes – Exception Handling at Read time

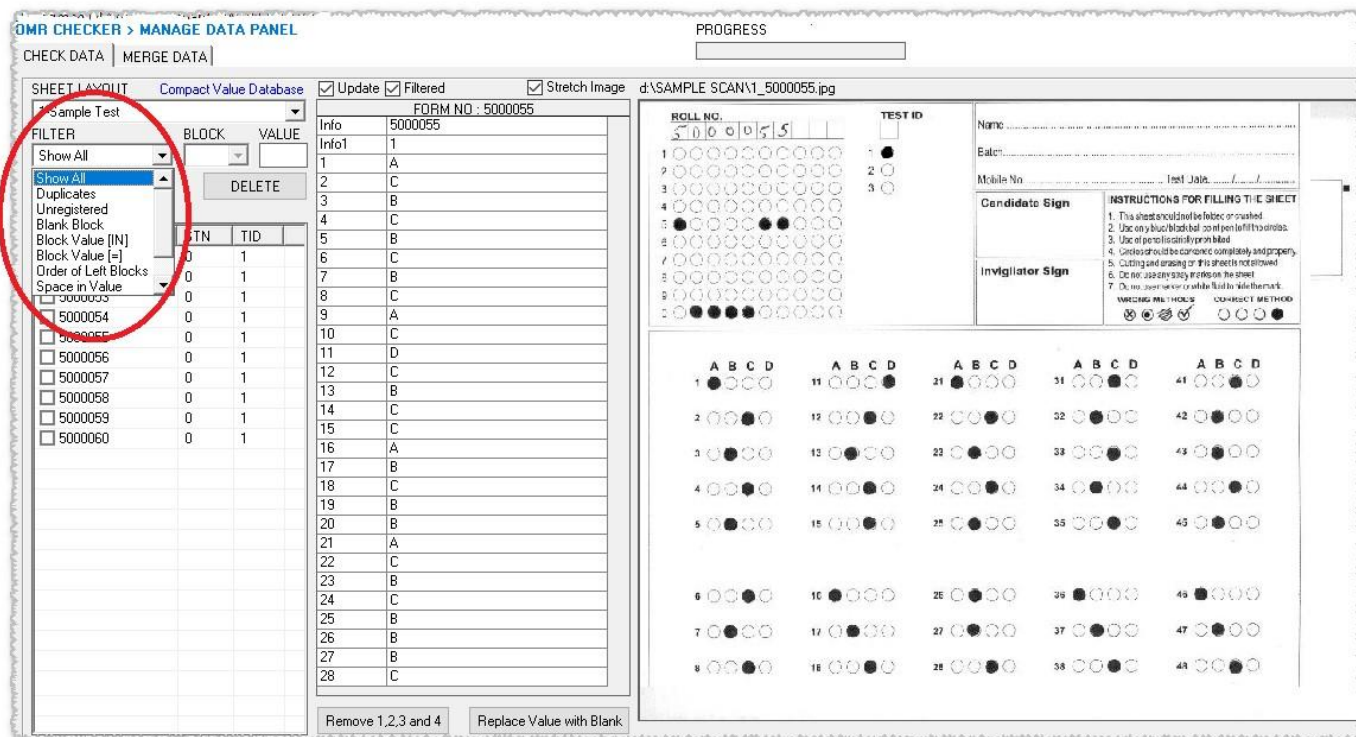
Data Editing, Safety and Speed

68. Allows editing of error filled data at the time of reading in manual mode.
69. Provides enhanced interface for complete data correction with ability to sort as per various issue types like invalid ID, Blank field, Duplicate Values etc. Also displays sheet image for reference while editing.
70. # Allows password controlled access to data for editing.
71. # SQL database used at backend for efficient processing.
72. # Allows **multiple instance reading** achieving speed of upto **10000 sheets/hr** on a single PC*.
73. Standard version is able to read minimum 20 to maximum 50 sheets per minute.
74. # Professional version is able to read to minimum 60 to maximum 150 sheets per minute depending upon version and PC configuration.

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Screenshot of Post Reading Data Edit Interface

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Objective Question Evaluation, Answer Key, Marks & Candidate Data handling

75. It supports different objective evaluation patterns like:

- Regular MCQ with single choices
- Regular MCQ with Multiple choices
- Linked questions (questions dependent on each other)
- Psychometric questions (questions with option wise marks) etc.
- Student Generated Responses
- Subjective questions (Manual entry /import of score)

OMR Answer Sheet Checker is a generic software which fully supports all test patterns used in any type of MCQ based exam held across the world like IIT JEE, NEET, AIPMT, CPT, IBPS, SSC, CBSE, CET, CAT, SAT, ACT, GRE, GMAT etc.;

76. It supports different structures of questions like:

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- a. single choice questions e. numerical questions (Student generated responses)
- b. multiple choice questions f. # fractional value questions
- c. matrix matching questions g. Subjective questions (Manual entry /import of score) d. True & False Type Questions

77. It supports different scoring patterns like:

- a. Negative scoring f. Weighted scoring (for psychometric tests)
- b. # Fractional scoring g. Linked Question scoring (for test like GATE)
- c. Proportional scoring h. # Scaled Scoring (for test like SAT/ACT)
- d. Decimal scoring i. Manual entry /import of score (Subjective questions) e. Differential scoring

78. It allows to define and evaluate multiple tests simultaneously following multiple type of evaluation patterns.

79. Any test can comprise of multiple sections/subjects. Multi-Subject or Multi-Topic evaluation in the same sheet with multiple (different) marking schemes.

80. Questions can be tagged according to multiple filters which can later reflect in topic wise / filter wise results.

81. Correct answers keys can be entered into the software by following ways:

- a. By manual entry/typing;
- b. By scanning a correctly filled OMR sheet;
- c. By copy paste from excel sheets.

82. It allows **password protection** of answer keys, test settings and read data.

83. It automatically segregates sheets of multiple sets of a test even if scanned in jumbled order.

84. It allows to automatic evaluation of multiple sets of test papers having jumbled answer keys.

85. It also supports question cancellation & compensation scoring.

86. # Allows use of Bonus Questions.

87. # Allows setting of Grades and Scaled Scores for a range of raw scores (for SAT & ACT exam pattern).

88. Software can import candidate records from excel. It allows to create and modify student records within the OMR system as a library to refer at the time of reading sheets and display results for valid candidates.

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Reports and Outputs

Annexure B (OMR) Data Storage, Export and Management

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89. The software has the capability to store data of multiple tests of different

groups to draw out a comprehensive result when required.

Ready Graphical Representation: Instant Graphs for any type of Data collected

90. Software provides filtered listing of any erroneous or issue prone sheets like duplicate IDs or sheets with multiple filled blocks, specific block with specific values, specific blocks as blank etc.

91. Software is able to internally store Sheet images along with the read data as reference for quick validation of data if required.

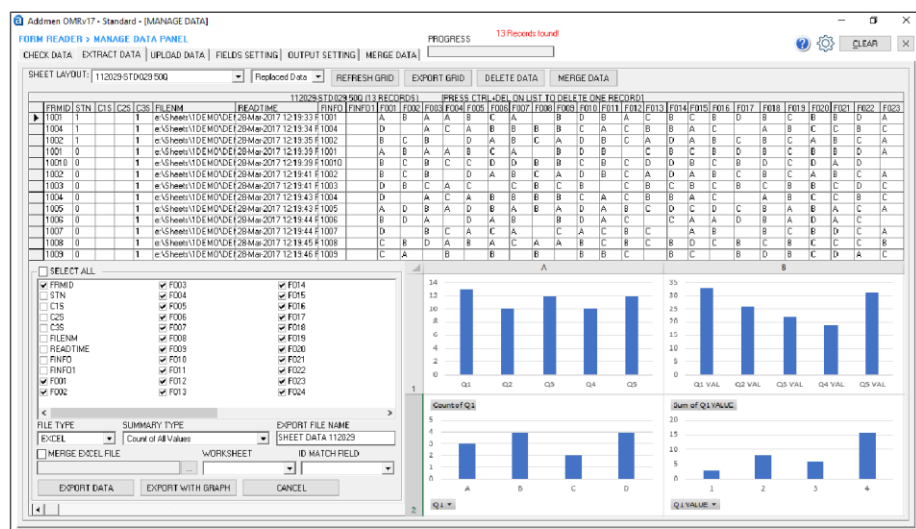
92. The software displays the sheet along with its read data at the time of correction of data values.

93. Post reading data alteration can be password protected.

94. Exports data to formats like CSV/TXT/XML/Excel (XLS/XLSX)/ Access(MDB) /SQL /dBase/Lotus/ RPT/DIF/ODBC/DAT/HTML/PDF.

95. # Can insert its data tables into user defined SQL server.

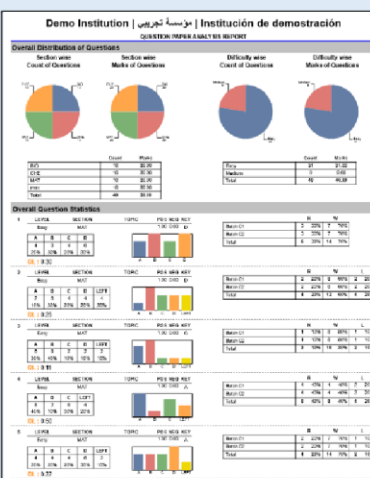
96. # Professional allows open reporting by user defined SQL query.



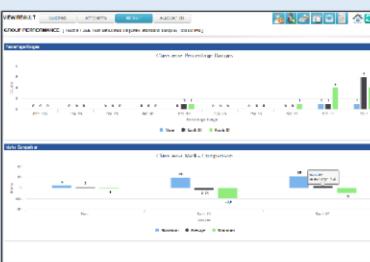
upto 35 Export Formats, including



Graphical Student Performance Report



Graphical Question Paper Analysis



Group Performance Graphical Comparison

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Printable Reports and Editable outputs

97. Following reports are generated with the flexible Data filters.

- a) **Single /Multiple column Section wise mark list** with details of correctly attempted, Incorrectly attempted and unattempt questions along with score in each section, total score/ percent.
- b) **Basic Charts and Graphs**
- c) **# Elaborate graphical performance analysis report** for each individual candidate comparing the candidate with toppers and group average on the basis of overall score, section wise score, topic wise score, positive and negative score and performance in various difficulty level of questions.
- d) **Question response Data** in spreadsheet. Several variants with response values, or scores alongwith calculated summary fields.
- e) **Statistical Analysis of Question** like Difficulty Level of question, Item Discrimination Index, Ferguson's Delta, Item Response Curve etc.

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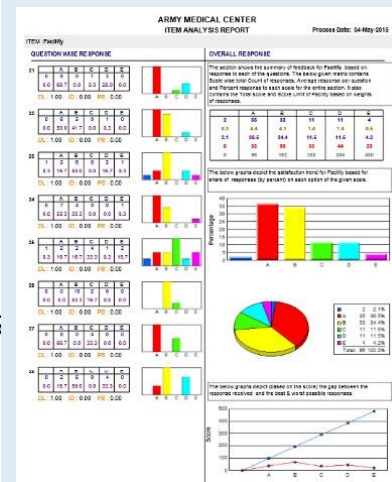
Kairee System OMR SHEET READER SOFTWARE

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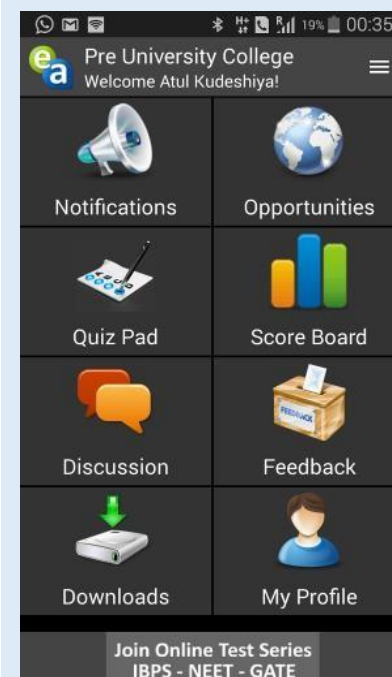
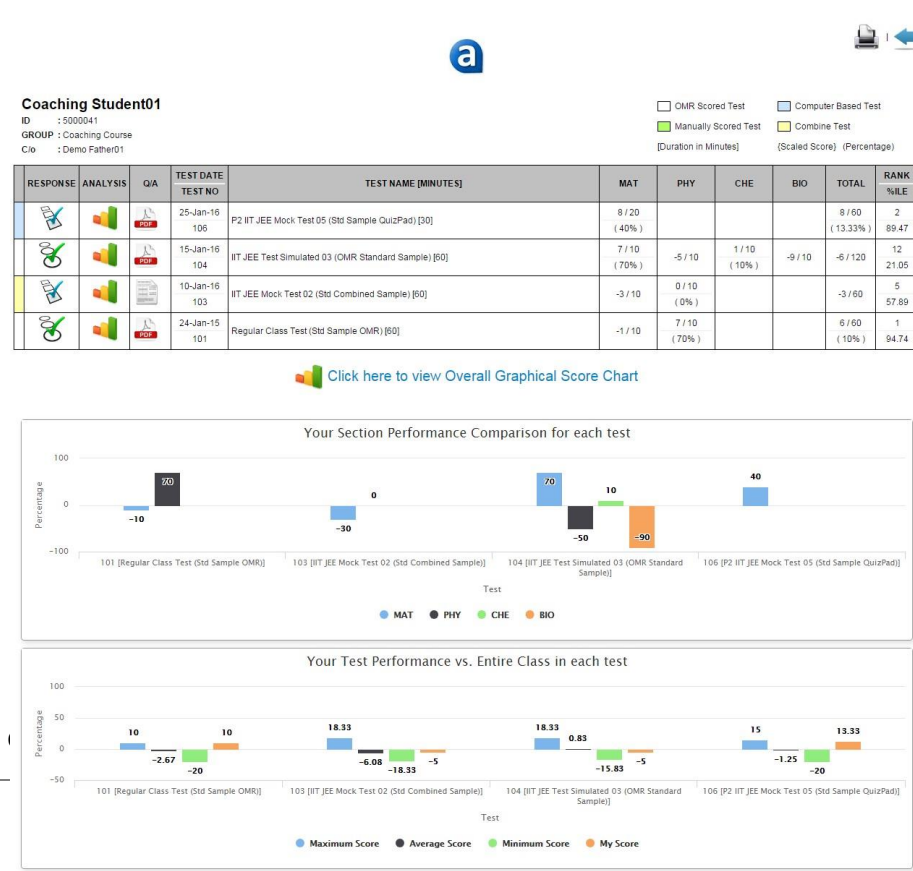
- Statistical analysis parameters for reliability of test like Kuder Richardson's Coefficient, Alpha Cronbach etc.
- f) Item Analysis and frequency data for any read block on OMR sheet (used in feedback & surveys).

Integration with APP, SMS, Email, Online Score Board

98. # Integrated with Android interface to conduct Online interactive quiz session on smart phone in class room.
99. The OMR software has an integrated SMS sending facility if web based SMS credits purchased additionally.
100. The OMR software has an integrated Email sending facility if web based Online Score Board or CBT modules are available.
101. # The software has an add-on possibility to display results over internet if Online Score Board module is available.
102. # The software has inbuilt facility to upload compressed data and images for online display of results.
103. # Integrated with Online Test module to upload offline data and collate results with online candidates on the Online Score Board.



Item Analysis for Feedback



Test Results on Android App



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Server Connectivity and Data Portation

Server connectivity is a addon feature that works over the Standard or Professional version. The basic functionality of the variant is maintained and few additional features are added related to OMR data transfer over the internet.

- 104. Sheets are created at the central (server) location and can be synced with the terminals. So many different layouts can be read by the terminals.
- 105. The terminal reads the data and uploads to the server where it is centrally processed, evaluated and result output is generated.
- 106. The terminal can be kept independent such that it reads scanned sheets and uploads data to server while it can still get data output and results locally.
- 107. The terminal can be made dependent such that the terminal utility has only the Read Sheet panel and Uploading panel. The provision to get results locally is removed. The terminal can upload the data to the server only where it is processed for further use.
- 108. The terminal OMR utility can be bound to a fixed IP so that it is connected to your server only.
- 109. Each terminal has a login based access, so that the access can be restricted after project.
- 110. Only read data can be uploaded to the clients server immediately after reading the sheets. Data can be uploaded without sheet images so it involves less data transfer and takes less time.
- 111. Photographs, signatures and other images on the OMR sheet can also be read and uploaded. If desired, sheet images can also be uploaded but that will increase the transfer time and might be prone to disconnections.

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User Facilitation

- 112. The product is ready to implement, downloaded from internet and installed by the user themselves.
- 113. New version with major updates is released every year with new features and improved functionality and interface. Minor updates and revisions are released throughout the year.

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114. Software setup is provided to the client and the user is able to install the software on any PC anytime at his own discretion and license policy supports this freedom.
115. User can lodge and follow his support requests in multiple languages directly from support interface within the software and can keep a track of his support requests.
116. User shall receive within the software inbox time to time alerts about the minor updates and feature enhancements carried throughout the year and guidance related to implementation of the same.

System Requirements/ Computer Specifications to run Addmen OMR/ICR/QPG Software

Addmen OMR runs on any computer running on Windows. All current day PC configurations are fine enough for this software to work. The better the computer configuration in terms of Processor speed & RAM, the faster the OMR processing.

System Requirement for Standard Version	System Requirement for Professional Version
OS: Windows XP SP3/7/8/8.1/10 (if windows XP, it requires Windows Installer 3.1 / 4.5) RAM: 2 GB or more CPU: 2 GHz Dual Core or more HDD: 50 GB or more	OS: Windows 7/8/8.1/10 RAM: 8 GB or more CPU: 2 GHz Quad Core or more HDD: 100 GB or more Database: MS SQL Server 2012 Express or higher

1. Supporting Software license/ freeware:

- a. MS Word (2003 or later) -Not mandatory, required for data entry/editing in QPG Module
- b. MS Excel (2003 or later) -Not mandatory, required for viewing OMR output. Alternatively data can be obtained in CSV format.
- c. SQL Server 2005 Native Client Driver 32/64 Bit (if required in windows XP)
- d. InkScape (License free)-Not mandatory, required for external sheet editing

2. Internet connection,

The Standard Version OMR Software is a standalone Client application which installs and runs on the computer as an EXE. It is not a web-based or browser-based software so there is no question of any browser

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compatibility. Internet in general is required for Download, update, support request and to receive technical help via desktop sharing.

Internet is required only if you want to :

- a. upload OMR sheet designs & settings on safe server;
- b. upload Question Paper to Online Test Software;

Internet connection for Server Connectivity feature,

- c. Internet required at the distant Client/Terminal for sheet download and data upload;
- d. Internet required at the Base Computer/Server for data download;
- e. Static IP required at the Base Computer/Server for data download;
- f. Server IP to be allowed in firewall & antivirus (may be required for some deployments)

3. LAN/ Network connection for additional Terminal licenses on LAN/Network,

- a. All the terminals must be on same LAN (single gateway).
- b. Base computer shall be used as virtual lock server. It should allow inserting USB dongle.
- c. LAN Terminals shall have dual check: Serial Key Registration and Network lock on LAN.

Sincerely,
Business Manager

What Addmen can do for your Institute ?

Complete Automation from
Enquiry & Admission to Academics & Assessment to
Accounts & Assets.

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Below is a matrix of wide areas that we cover, more specific list of modules in further pages.

Admissions	Walk-in / Online Enquiry or referrals	Multiple Branch or Franchisee Management	Online Application on website	Lead Mgmt. & Follow ups	Admission Register Courses & Classes	Identity card & Documents
Academic	Attendance	Lesson Plan & Course Progress	G	Digital Valuation E-Control		
Assessment	Online / Offline Question Bank	OMR Evaluation	O (C	Android Interface		
Finances	Fee Collection	Expenses & Accounts	Payment Gateway			
Administrative	Employee & Payroll Mgmt.	Library Management	Stock Management	Hostel & Transport	Applications & Memos	
User Interaction	Student & Parent Dashboard	Admin, Staff & Faculty Dashboard	Download Document	Messages & Notifications	Queries and Complaints Resolution	Feedback & Survey

Not only the Software tools,

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We also provide **Managed Services...**

Examinations – Surveys – Data Collection