TABLE OF CONTENTS

1. UNDERSTANDING OMR PROCESS

Any software gives output according to the input given in the form of data/image/settings. The format of input is predefined and its parameters are specified for smooth functioning of the software to able to deliver different types of desired outputs.

OMR is a man-machine combination process. Correct and **same input will give the same accurate output** till the end of time.

The input of the OMR system is the scanned images of sheets that reach the software as an input after passing through many processes and external devices. These OMR sheets have been designed, printed and scanned by man, on devices other than the software, and thus there is a risk of deviation at every step. If the input sheet image is correct, as specified, it will be accepted and read by the software smoothly, or else if it might be found to be unfit when subjected to series of logical checks during reading, either the input will be rejected, or the software shall prompt the user for each failure or defect or deviation in the sheet. And so there is a need to **follow proper designing, printing and scanning guidelines** to avoid any substantial deviation from the expected input to the software.

The process of correct input starts with correct design of OMR sheet. Printing & Scanning of OMR Sheet are the most important steps. Most users make mistakes at this level. **If the design-to-scan process is done properly by the user, software is negligible to understand.**

Kindly read following list of annexed documents, essentially before proceeding to have a thorough understanding.
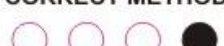
- **OMR Sheet Design Guide**
- **OMR Sheet Printing Guide**
- **OMR Sheet Scanning Guide**
- **OMR Software Accuracy**
- **OMR Software Performance and Speed**

HOW TO FILL OMR SHEETS ?

- Carefully read the instructions given on the sheet before filling. Most mistakes and most common mistakes happen due to negligence in reading and following the instructions for filling OMR Sheet.
- OMR sheet has to be filled using Blue/Black Ball Pen or HB pencil. Use of Pen/Pencil depends on the rules set by the exam body. DO NOT use Ink Pen as it might bloat or spill.
- DO NOT under fill or overfill the OMR circles. Avoid partial filling or spilling out. Start filling the circle from outside in, to avoid any spilling out. First fill the circles/boxes in the OMR sheet completely and then darken the filled circles/boxes. Completely darken the respective circle for your response.
- Please fill the appropriate OMR circles with due care. Avoid over-writing on OMR Sheet. Mark multiple bubbles only in case of MCQs. If you mark more than one circle in a single choice question the answer will be considered as being wrong.

More details on this topic can be found at:

www.addmengroup.com/**common-mistakes-on-omr-sheets**.htm

www.addmengroup.com/**how-to-handle-omr-sheets**.htm

www.addmengroup.com/**how-to-fill-omr-sheets**.htm

2. INSTALLATION OF OMR SOFTWARE

INSTRUCTIONS FOR FIRST TIME USERS

1. Use a fresh virus free Windows PC. Any Windows XP,7,8 (32/64 Bit) is OK.
2. Visit the Url: http://www.addmengroup.com/support.htm
3. Download Software Setup (OMRSETUPvX.ZIP). The setup file is same for both OMR & QPG Softwares.
4. Unzip and run OMRSETUPvX.zip file. During the setup, it will only ask for change in installation location. The default location of installation is C:\ADDMEN which can be changed if desired.
5. After installing the setup, ADDMEN folder is created at C:\ADDMEN or in the location you selected and required shortcuts are formed at the Desktop and Programs Menu.
6. In case the installation fails, kindly turn off Firewall, Anti-Virus and run the Setup again as Administrator by right clicking on the Setup file.

NOW THE SOFTWARE IS INSTALLED AND READY TO RUN. But it will need the license key to run. The license key is either provided in the form of a combination of USB dongle and PC registration. An unregistered USB dongle license can be used on any PC for a limited number of runs. This is a SoS provision. The license must be registered on a specific PC.

7. Attach the USB Lock sent to you on an active USB port on your machine. The lock is a plug and play device and needs no driver installation. The lock will not show up as a pen drive amongst other drives.
8. Run the OMR/QPG Software using the shortcut given on the desktop. The software will run and you will reach the main screen.
9. If you have not been provided the USB dongle then please inform the 32-digit Key prompted to you in the message when you try to run the OMR Software. We shall activate your softkey so that you can run the software without USB dongle.
10. If the software installed with the setup is not working with your key, then please carefully read the messages given. The messages are explicit and guide you what to do.
11. If technical help is required, contact technical support team by raising Support Ticket from www.addmengroup.com/support.htm. The updated contacts of the Technical Support Team are also provided on the same webpage.
12. Keep ready with good speed internet connection for troubleshooting/training via desktop sharing.

PLEASE CHECK THAT YOU HAVE FOLLOWED ALL INSTRUCTIONS GIVEN ABOVE BEFORE CALLING.
PLEASE DO NOT CALL MARKETING NUMBERS FOR SETUP & TRAINING.

INSTRUCTIONS FOR EXISTING USERS

If you are an existing OMR/QPG User and wish to format your machine or reinstall the software, first take a backup of existing ADDMEN folder in a CD.

Run the setup as explained above. ADDMEN folder will be created at C:\. This is a blank folder with no data as it has been freshly installed. Delete this newly created ADDMEN folder and replace it with your existing backup of ADDMEN folder.

### UPDATING THE SOFTWARE

3. OPERATION STEP 1: DEFINE TEST

SECTION MASTER

- Replace Section1-Section5 with the sections/subjects in your institute.
- Remember the section names must be entered in the same sequence in which you plan your test e.g. Physics, Chemistry, Maths or Economics, Law, Statistics etc.
- In Topics Master you can create multiple Topic Tags. For e.g. if section/subject is Physics, Topics can be Light, Sound, Electricity etc. Tags can be grouped by putting a prefix separated with "-". This will facilitate to provide group wise results for tags (explained later in results section).
- One test can contain maximum 5 major sections. For more than 5 sections, multiple Topic Tags are used.
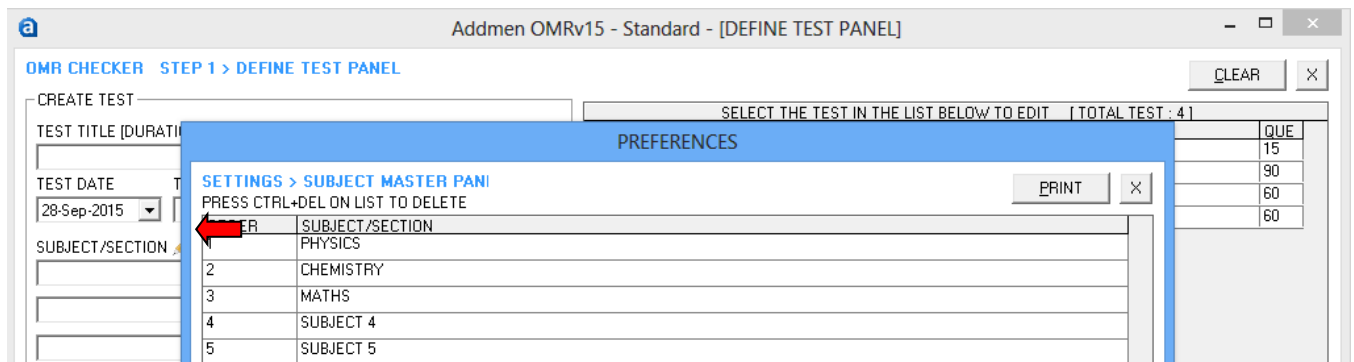
CREATE TEST

Set parameters like Test Name, Test Date, Different Subjects included, Number of Questions for each subject, Cut-off marks (if any).
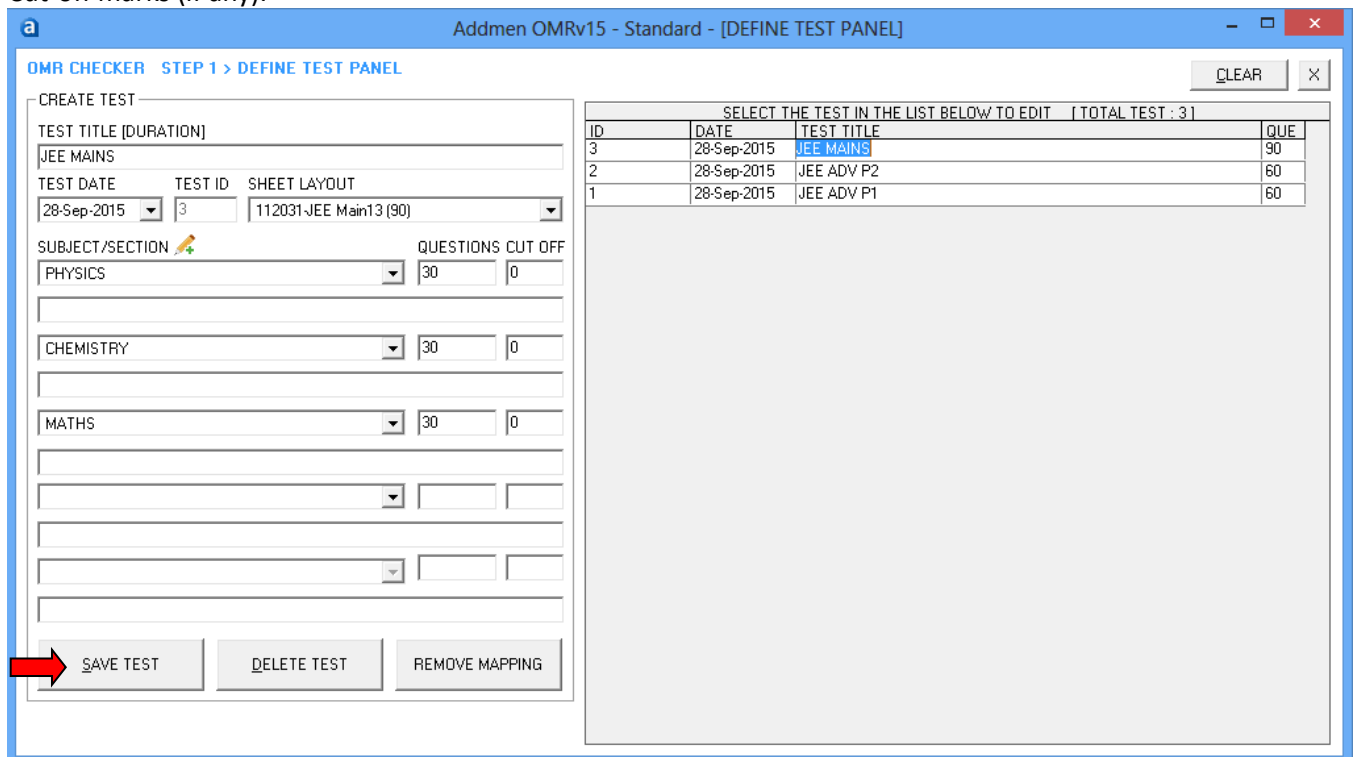
Test Tittle [Duration] Field - Insert Test Title. (Example:- SAMPLE TEST)

Sheet Layout Field - Select Sheet Layout according to the design which you have distributed for this particular Test. On a sheet of 100 questions, you can take a test of upto 100 questions.

Subject/ Section Field - Select subjects as per your test sequence with the help a drop down list.

Ques Field - Number of Question for that particular subject.

Cut Off Field - Cut off marks in a subject are used as a parameter at the time of reporting or plotting Graphs and other analytical reports. If you do not enter anything into this field, it will be automatically taken as 0.

4. OPERATION STEP 2: SET ANSWER KEY

Answer Key can be 1) entered manually; 2) copy-pasted from Word file or Excel sheet; 3) extracted from a correctly filled sheet. Adjacent figure shows how to enter answers from Excel. The answers string should be typed in single column of Excel or word file without any labels or bullets.

Following types of Question Blocks are supported

1.a
2.c
3.b

1	A
2	C
3	B

a. Single Choice/Multi Choice
b. Horizontal Matrix (Matching Type)
c. Vertical Matrix (True/False Type)
d. Numerical

Sample answer string:	
SCQ/MCQ type question (Block Type GENERAL) : A, AC, BCD Integer type question (Block Type NUMERIC): 9, 23, 0346, 346 Matching (4x5) type question (Block Type X-MATRIX) : XXRXX-XXXXT-XQXXX-PXRXX True/False(2x5) type question (Block Type Y-MATRIX): XQ-PX-XQ-XQ-PX	

If the answer of a question is wrong or ambiguous and you want to cancel the question and award bonus marks to all candidates, then,

To cancel a question, leave the answer key blank.
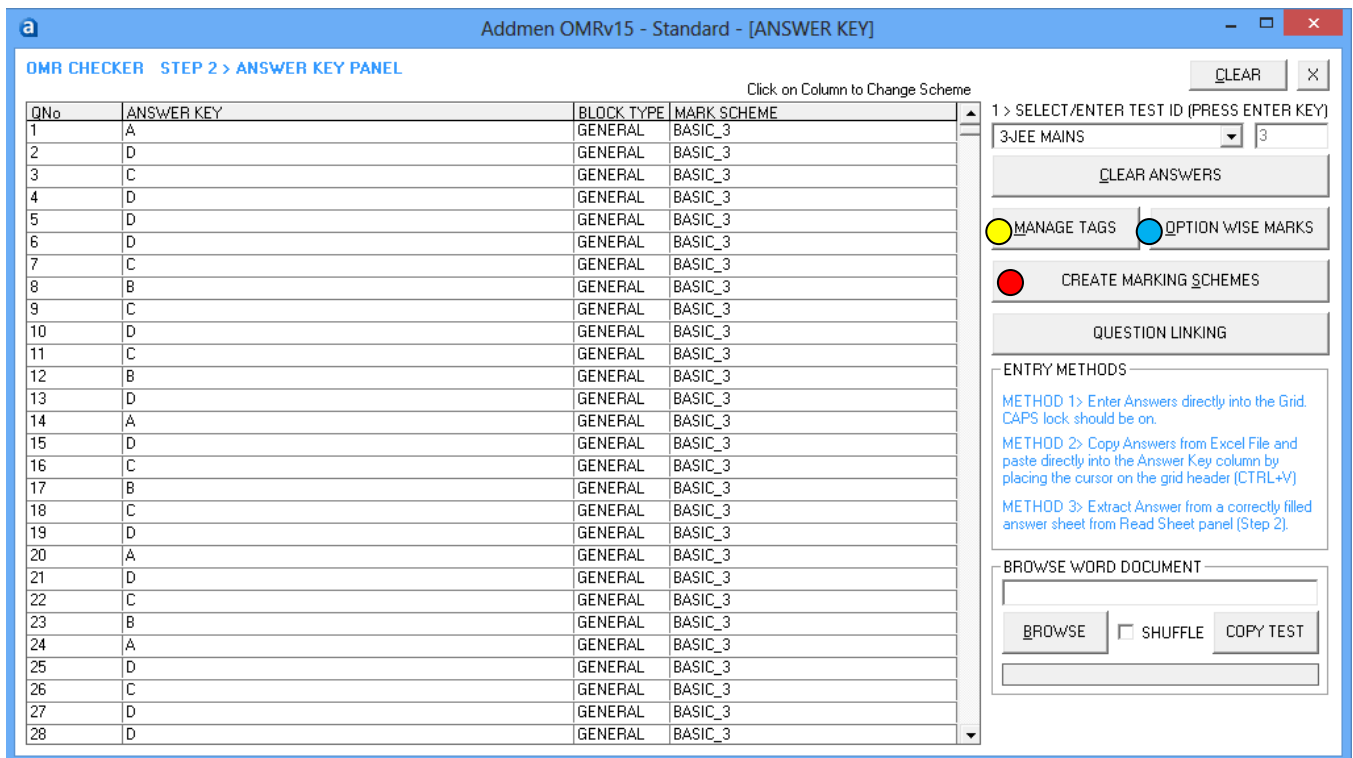
APPLY MARKING SCHEME

🔴 **Create Marking Scheme**

- You can create any type of marking scheme according to your test planning.

- This involves setting the Evaluation Criteria and the Marks applicable thereof. This task is not required to be performed before every test. The marking schemes can be created whenever there is a change in the paper pattern or marking pattern.

- Basic Marking Scheme exists by the name "General". Its name and marking pattern can be changed but it cannot be deleted. You can create new scheme by entering new scheme names.

- In the POSITIVE & NEGATIVE Marks fields, enter the positive and negative marks applicable when the entire question is correct or incorrect.

- In the PART POS & PART NEG fields, enter the positive or negative marks applicable when one option or a part of the question is correct or incorrect.

- BONUS marks are usually equal to correct positive marks and are uniformly allocated to all candidates if a question is cancelled.

- Choose a standard evaluation mode. Usually Mode 3 suits MCQs as it is the super set of all conditions. Mode 2 is suited where partial or proportional marking is applicable like in matrix matching questions.

- To evaluate only a limited or first 25 questions in a section, create a marking scheme with "TOPxx" as prefix to the name. For e.g. TOP25, TOP50 etc.

- In case there is any amendment in the marking scheme of a test once it has been evaluated full or in part, then the result must be recalculated by pressing the CALCULATE button on the Results panel.

⚪ **Set Marking Scheme**

Different marking schemes can be set for different questions. In the beginning all questions bear the default marking scheme and thus are checked according to the properties of this default marking scheme.

Marking Scheme can be changed from the Answer Grid. To change the scheme in bulk, Click on the MANAGE TAGS Button in ENTER ANSWER KEY Panel.
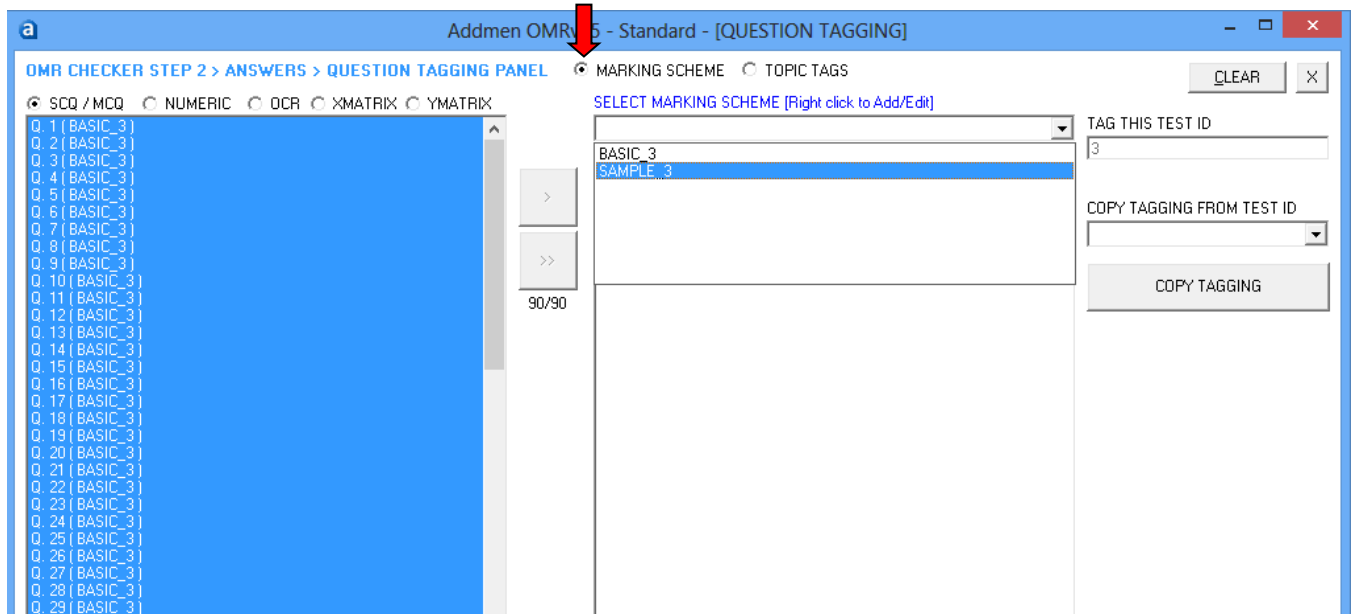
🔵 **PSYCHOMETRIC (OPTION WISE) MARKS SETTING**

Some test paper pattern bear variable marks for each option in each question. Marks can be set for individual options or combination of options also.
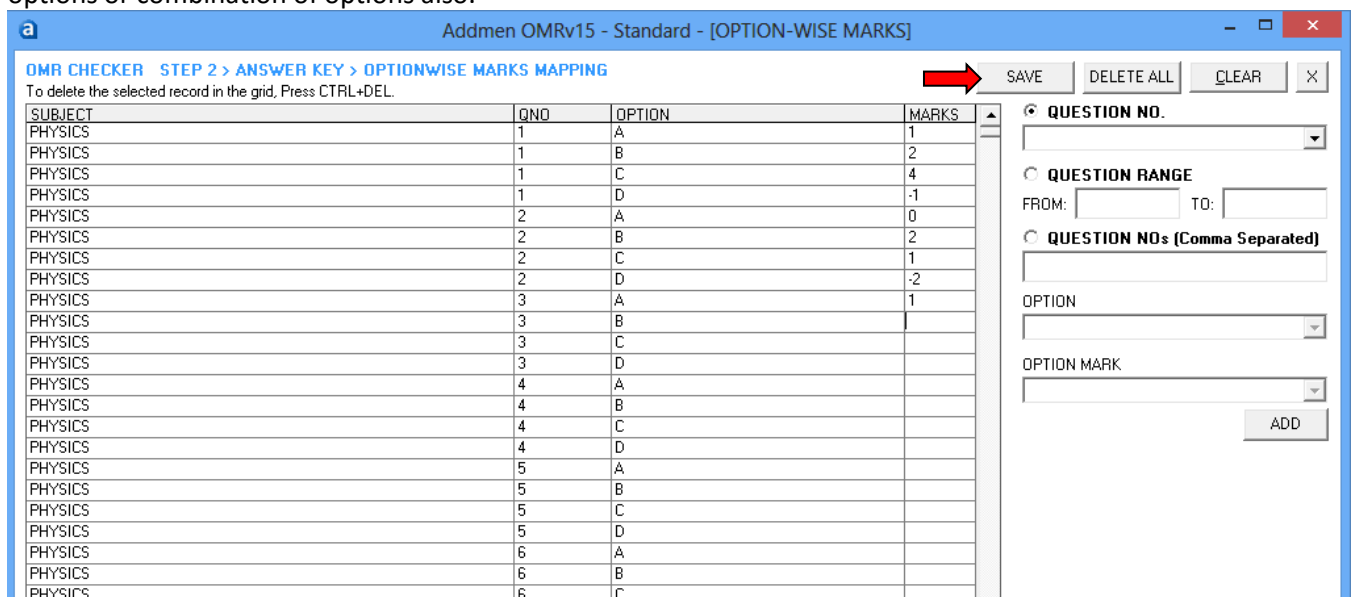
LINKED QUESTIONS SETTINGS

Some test paper pattern comprise of interdependent questions which implies that if Q.12 and Q.17 are linked to Q. 3, then Q.12 & Q.17 will be evaluated only if Q.3 is correct. These type of questions are used when the concepts are to be evaluated. So if Q.3 is core to the concept, and if it has not been answered correctly then, there is no consideration for Q.12, 17 or any other question evaluating the same concept.

5. OPERATION STEP 3: READ SHEETS

At this point you would require scanned images of OMR sheets. Instructions for sheet printing and scanning format have been explained in earlier sections.

- Sometimes many sheets have to be read during adjustment of settings. So these files get renamed during dummy reading. It is always a good practice to keep a copy of scanned images folder and read this fresh folder, once the settings are done.

- Browse the folder where you have kept your scanned images. Remember this folder can have any name and should preferably be placed anywhere on your hard drive. Use of a network folder is not suggested as the speed of evaluation will be negatively affected by the network speed.

- Select the sheets to be evaluated by click and drag in the files list. In case of Answer Sheet Checker, select Test ID on behalf of which you are reading these answer sheets. In case of Form Reader select the form layout for which you want to read the data.

- First select few sheets one by one and adjust the margins and settings like Read Threshold, Upper & Lower Threshold etc. Read time Settings are explained in detail in the subsequent section.

- Clipping margins are visible as red lines. Margins should be so adjusted that the index points of most sheets fall inside the defined margin and all the blackness or dirt on the edges of the scanned image are outside the margin. There would be rare cases that will be skipped because they do not fit in the common margin defined for major lot of sheets. So we can adjust the margins separately for each of these when we are solving skipped cases. Once such cases are solved, the margins should be set to back to default for that lot. Margins can be adjusted by dragging.

- Adjust the sheet preview vertical scroll so that the Form ID (and Test ID) block is visible because it will be convenient to respond when the software will prompt for issues related to roll no. filling.
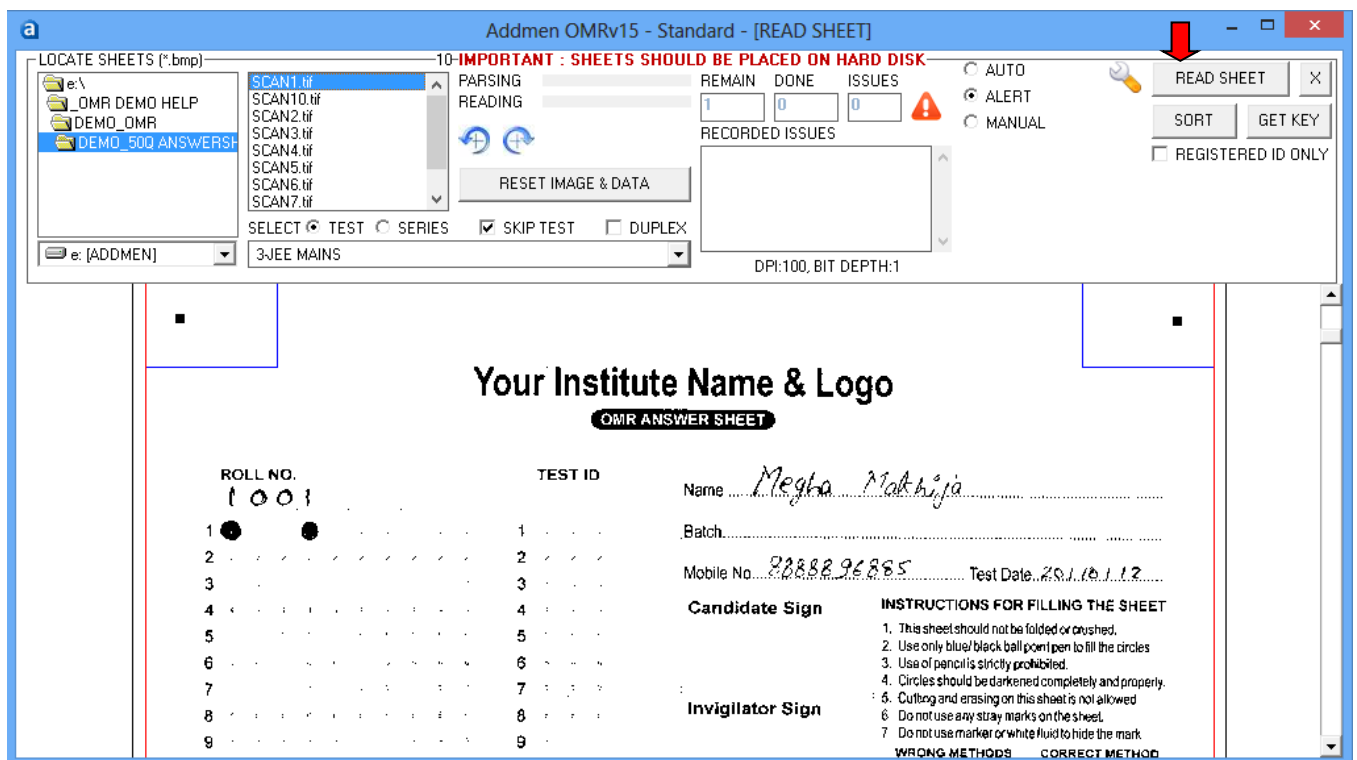
- There are three evaluation modes namely, **AUTO; ALERT; and MANUAL**. In case of repeated work in a given mode it can be set as the default read mode from the settings menu.

- Select 'AUTO' mode first to clear out maximum cases in which there is no issue related to printing, scanning or filling by the candidate. In AUTO mode maximum trouble free sheets will be evaluated at highest speed and the sheets that have any issue to be attended by manual judgment, will be skipped and renamed with a prefix of Sort Code.

- Secondly, 'ALERT' mode should be selected. It is more efficient to select sheets with similar error sort code prefixes and read simultaneously. If there is possibility of too many errors in the chosen lot of images, then first select ALERT mode to avoid wasting time in AUTO mode when you already know that most cases will be skipped. If there is a possibility of too many errors in Form ID/Roll Number or Test ID filling, then select 'MANUAL'.

- To start reading, press the READ SHEET button. Sheets will be renamed after reading as TestID_FormID.BMP.

- To check multi-set tests, answer sheets of multiple sets of a test can be collected and scanned mixed up in the same folder. Check the 'Series' option and select the series to read from the list in the dropdown.

- Before reading, the sheets can also be sorted in the software by pressing the SORT SHEET button first instead of READ SHEET. Once the sheets are sorted the files will be renamed as Testid_ScanName.BMP. Now select the sheets of specific Test ID and press READ SHEET button.

- To get answers from a selected answer sheet, press the GET KEY button.

- There are several types of issues created by the candidates in filling their ID. Sometimes the ID is left blank or multiple bubbles are filled in same column or there are duplicate IDs where one candidate fills the ID of the other. All such cases are identified and sorted. But if an ID is filled which is not expected to be read, for example if a candidate present in the test, by mistake fills the ID of a candidate who is absent in the test, or an ID which does not belong to your institute, then there is no way to detect that this candidate was absent or irrelevant. For this a list of (present) candidates can be imported into the software, and the option of "Read Registered only" is selected so that it can tally the IDs at realtime and prompt if any such case is found.

- If we want begin fresh evaluation, first delete the result of that test or form from the RESET IMAGE & DATA panel. Also because few files might have been renamed during previous reading. You can also rename the sheets for visual convenience using RESET IMAGE & DATA panel, so that the files bear uniform name pattern as at the time of scanning. There is also provision to convert images scanned in JPEG or Multi-page TIFF to Single Page TIFF or BMP file format.

- Most scanners name duplex sheets in running serial order. You can rename the entire lot according to duplex pattern with suffixes A & B for both sides of the sheet using the Convert panel. In case of duplex reading the Duplex option is checked and the first layout is selected in the test list.
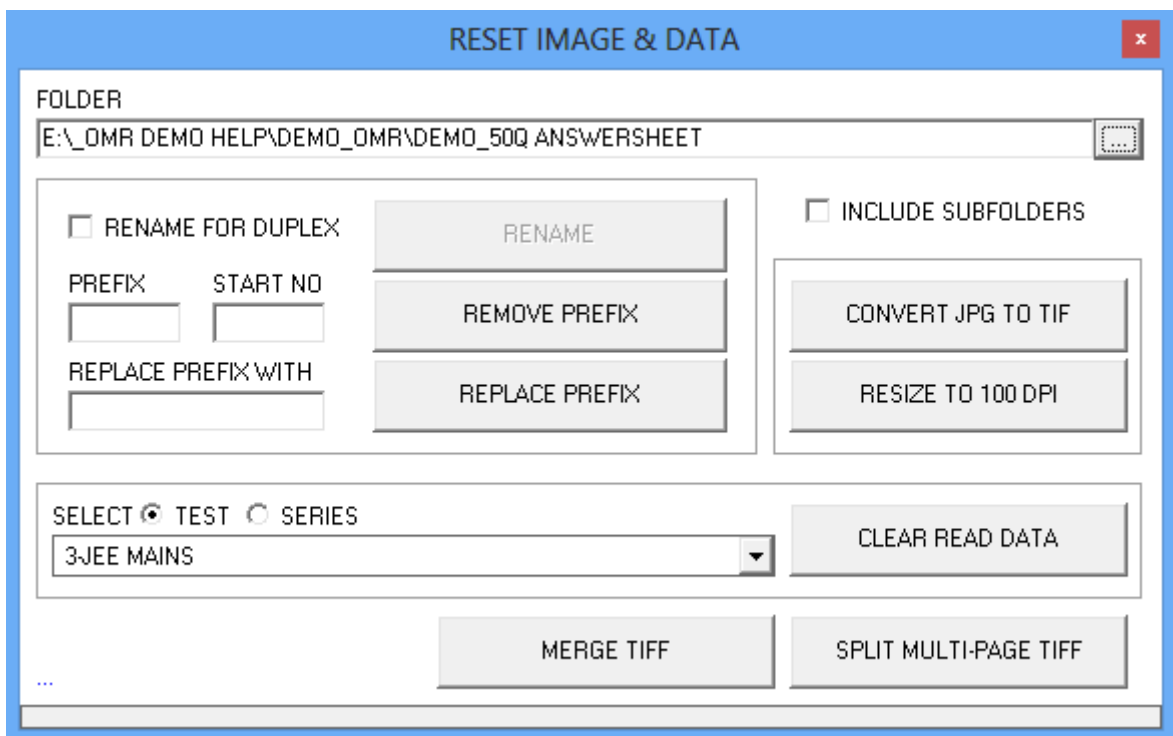
SORT CODES FOR FAULTY SHEETS

Problem sheets are renamed with relevant prefix so that they can be collectively select and resolve them. List of prefixes used for identification of improper sheets:

UNR: Unreadable File (Image is corrupt or File Type is wrong or DPI less than 96 or more than 300) **IDX**: Unreadable Index (Index point is either misprint or out of read margin) **SKW**: Skewed (Images are tilted more than allowed limit) **THR**: Skip on more than 50% filled (Some bubbles not read at the set threshold, but were substantially filled) **MNL**: Manual Skipped (Skipped after a alert on issue) **FRM**: Manual ID or Test Skipped (Candidate ID or Test ID entered manually) **IDC**: Custom Index Skipped (Sheet skipped after manual Index point adjustment) **DAT**: Data Verification Skipped (Sheet skipped after Data Verification alert)	**BID**: Blank ID (Candidate ID not filled) **BLT**: Blank Test ID (Test ID not filled) **DID**: Multi Filled ID (Multiple bubbles filled in same column of Candidate ID Block) **DBT**: Multi Filled Test (Multiple bubbles filled in same column of Test ID Block) **DUP**: Duplicate ID (Same Candidate ID Filled by more than 1 candidate) **IID**: Invalid ID (Candidate ID not in list) **LID**: Invalid ID Length (ID does not have specified no. of digits) **IVT**: Invalid Test (Test ID not defined) **ILT**: Invalid Test or Length (Test ID does not have specified no. of digits)

6. STEP 4: VIEW RESULTS

- Any test that has been read, is visible in the 'Test IDs' pane and displays '0' records.
- Select the test and press the 'CALCULATE' Button. Now the 'Test IDs' pane will show some records for the number of sheets checked against this test.
- To obtain processed results in ready to use report formats, select Result Type and press SEARCH. By default all subjects and groups in that test are searched. You can select a specific Group or Subject to draw out a limited report.
- To obtain basic question response data and its detailed analysis select 'Question Response' option. 'Mark List' option allows you to select multiple tests at a time, while 'Question Response' limits the search to one Test ID only.
- After searching for required records, Results can be previewed in ready to print layouts. You can select the order of listing and alternative parameters like percentage or percentile to be displayed on report.
- Report preview layouts can be customized by the client also using Seagate Crystal Reports.

🔴 **IMPORT CANDIDATE RECORDS**

Candidate records are not compulsory to enter. Software checks and stores the result on the basis of unique ID only which is mentioned on the sheet. But if candidate records are entered, names can be displayed alongside ID in result reports. If you want to draw group wise result and ranks or read only for registered candidates, then candidate records must be entered into the software.
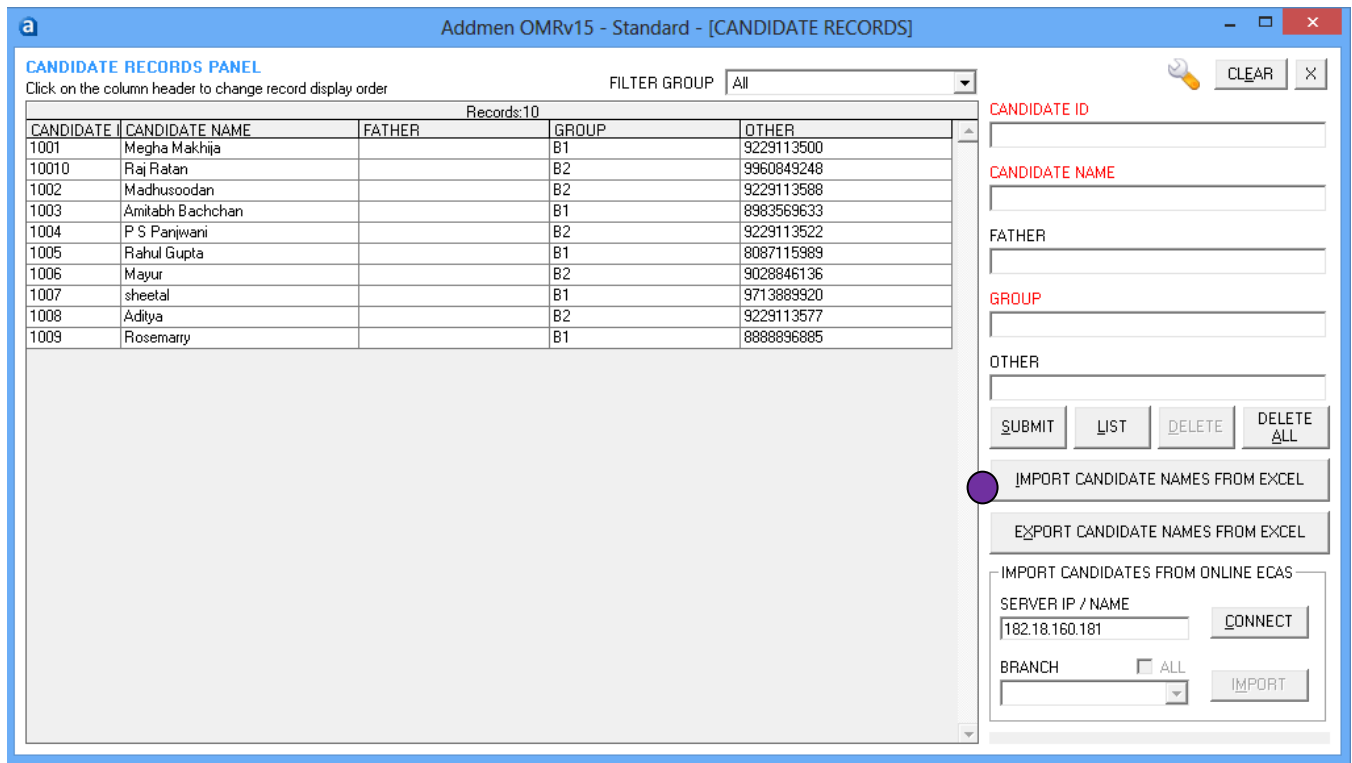
🟣 **Import Candidate Records From Excel**

- Candidate records can be directly typed into the software or can be imported from Excel sheet.
- To import names from Excel, any worksheet containing any number of fields in any sequence can be used. But it should atleast contain unique ID (Roll No.) , Candidate Name and Group information by any column name. Import from Excel panel gives you the freedom to select any field from your Excel sheet to transfer information in the desired field in the OMR software.
- To add more records to existing records in software, select APPEND option.
- To completely remove previous records and add new ones, select RESET option.
- To keep previous Roll Nos. and to update them and add new records, select REFRESH option.

EXPORT TO EXCEL OR OTHER DATA FORMAT

Results can be exported directly to XLS(Excel), MDB(Access), XML, CSV and DBF(DBASE) formats. Exported files are created in DATA folder at the installation location (ADDMEN folder). Default export format can be set in settings panel.

CREATE PDFs

Any report can be drawn as PDFs by pressing the CREATE PDF button. For example, if the graphical performance report has 50 pages and there are 5 pages per candidate in the report and you want to create pdf to send to top 3 candidates, then following values will be filled to create PDF:

      Pages From=1;   Pages to=15;   Pages/PDF=5

This will generate 3 PDF files having 5 pages each for the first 3 candidates in the report.
About PDF Merger

SEND SMS OR EMAIL

Excel exported output can be used for sending SMS through Addmen Desktop SMS utility which is installed with the OMR Software and can be found in ADDMEN folder. Exported Access file (OMRDBNET.MDB) can be used to send SMS through ECAS. To send reports through email, individual candidate Test Analysis PDFs can be created as explained above and attached and sent.

UPLOADING ONLINE RESULTS ON WEBSITE

Using the Online result facility, candidates can see their individual history of results, sheets, analysis and solution of all test appeared, presented in a tabular format in a single window on your website. The facility is not free and the user shall be able to upload only if his account has been activated on the website.

On the STEP 4 > View Result Panel, to upload result,

- Select Test to be uploaded and press SEARCH. After searching press UPLOAD button to upload results to Server. Externally edited database can also be uploaded by selecting 'External Data' checkbox to upload manipulated results.
- If a series of test each containing single subject are linked and are to be presented as a single entity on the website, they must be selected together and then searched and uploaded.
- Candidate OMR Sheets and Test Analysis PDFs can be uploaded for display on website using the FTP login given to the user.

Steps to Upload OMR Sheets & PDFs on FTP
Host Address: ftp://omrtestresult.com   Username & Password: provided by technical support

1. Open 'My Computer' and type your Host Address (ftp://omrtestresult.com) in the address bar and press enter.
2. Login Panel will appear on the screen. Enter your username and password and click on logon button.
3. If login screen does not appear then click on 'File Menu > Login as Command'.
4. If login is successful then your FTP content will display in the window.
5. Create a folder by name of desired TEST ID at server.
6. Copy the OMR sheets and PDF files generated by OMR Software in the ADDMEN/DATA folder and Paste these files into the TEST ID folder created at server.
7. Solution (.PDF) file can also be pasted in the same TEST ID folder created on the server.

NAME:	Aditi Gupta	ROLL NO:	30080
FATHER'S NAME:	Adesh Gupta	CLASS/BATCH:	SD-CA CPT

TEST DATE	TEST ID	TEST NAME [DURATION]	ACC	ECO	LAW	MATH	STATS	TOTAL	%age	%ile	RANK			
15-Jun-2011	108	P2 CPT MOCK [120]	0	28.75	0	10	8.75	47.5	15.83	100.00	1			
15-Jun-2011	107	P1 CPT MOCK [120]	41.25	0	27.5	0	0	68.75	22.92	83.84	2			
12-Jun-2011	106	P2 CPT MOCK [120]	0	35	0	13.25	14.25	62.5	20.83	100.00	1			
12-Jun-2011	105	P1 CPT MOCK [120]	41.5	0	21.25	0	0	62.75	20.92	92.62	2			
21-May-2011	104	P2 CPT MOCK [120]	0	32	0	16.25	10.75	59	19.67	100.00	1			
21-May-2011	103	P1 CPT MOCK [120]	45.25	0	27.75	0	0	73	24.33	100.00	1			
15-May-2011	102	P2 CPT MOCK [120]	0	32	0	16	12.25	60.25	20.08	100.00	1			
15-May-2011	101	P1 CPT MOCK [120]	35.75	0	28.75	0	0	64.5	21.50	100.00	1			

7. PREFERENCES & SETTINGS

Please Note: These settings explanation has been provided for understanding the scope & flexibility of software, please make sure users do not tamper with the settings unless they understand the complete meaning and implication of the same and unless they are guided by us to do so.

COMMON SETTINGS

These settings can be accessed from Home Screen because these effect the entire program and are not related to any particular step of operation.

PREFERENCES		
CHANGE PASSWORD	DELETE ALL TEST DATA	X

PARAMETER	VALUE
ORGANISATION NAME	ADMEN MULTI-STUDIOS
BACKUP FOLDER PATH	C:\ADDMEN\RESOURCE\
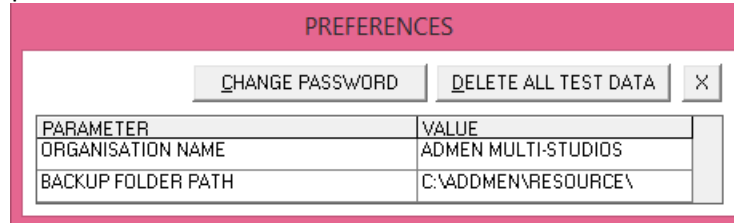
Change Password
To enable password protection on the "Step 2 > Enter Answer Key" and "Preferences"
Default password is blank and protection is off.

Delete all test data
To completely clear the database of all the tests created and read and processed data stored for them. This leaves the settings saved but removes the test definition and data.

OMR READING SETTINGS (STEP 3)

PREFERENCES	
SETTINGS > OMR PREFERENCES PANEL [3-JEE MAINS (112031)]	X

PARAMETER	VALUE
NUMERIC BLOCK [0=(0-9);1=(1-0)]	1
RESPONSE THRESHOLD [5-100]	30
SKIP THRESHOLD (UPPER,LOWER) [0-100]	0,15
KEY1 LENGTH [0-50]	0
KEY2 LENGTH [0-50]	0
READ MARGIN [TOP,BOTTOM,LEFT,RIGHT]	10,10,10,10
OCR READ ANGLE [0,90,270]	0
MAXIMUM ACCEPTABLE SKEW	10
STORE IMAGES[0=NO;1=DATABASE+FOLDER;2=FOLDER]	1
MULTIPAGE SHEETS SUFFIX [S1,S2]	A,B
INDEX POINT SIZE [WIDTH,HEIGHT]	7,7
ID REPLACE 1[0=OFF/COLUMN NO,VALUES=v1|v2|...]	0
ID REPLACE 2[0=OFF/COLUMN NO,VALUES=v1|v2|...]	0
ID REPLACE 3[0=OFF/COLUMN NO,VALUES=v1|v2|...]	0
AUTO ID [0=NO;1=YES;2=YES+CHK]	0
LEADING ZERO ID ON READ [0=NO;1=MARKED;2=ALWAYS]	0
COLOR TO B/W THRESHOLD [1-255]	128
READ INDICATOR [0=NO;1=YES;2=DESIGN]	2
DEFAULT SHEET DPI	100
AUTO ACCEPT SKEWED SHEETS [0=NO;1=YES]	0
DEFAULT READ MODE [0=AUTO;1=ALERT;2=MANUAL]	1
CONTINUOUS READING [0=NO;1=YES,PREFIX]	0
CHECK INDEX IN VERTICAL(LT,RT,LB,RB) [0=NO;1=YES]	0,0,0,0
SEARCH MARGIN(0=DEFAULT)[LTx,y,RTx,y,LBx,y,RBx,y]	100,100,100,100,100,100,100,100
READ/SORT IN SUB FOLDERS [0=NO;1=YES,PFX1|PFX2...]	0
SORT PROBABLE MARKED [0=NO;1=SKIP SHEET;2=SHOW ALL;3=SHOW MARKED;4=TAG BLOCK]	0
SORT MULTIPLE MARKED [0=NO;1=SKIP SHEET;2=SHOW ALL;3=SHOW MARKED;4=TAG NUMERIC]	0

Numeric Block [0=(0-9);1=(1-0)]

Numeric blocks on OMR sheet are used in Roll No, TestID, Integer Type Questions, Phone, Date of Birth and many other information blocks like Gender, Caste, Category, Centre Code etc. These numeric blocks have generally 10 Rows and columns equal to number of digits of value to be filled in. Some OMR sheets have the first row of the block starting from 1 while others have the first row of the block starting from 0.

Thus accordingly choose the parameter value between 0 & 1. Default is 1.

Response Threshold [5-100]

This is response sensitivity. Tick marks and pencil filled bubbles need more sensitivity to detect than bubbles fully filled with blue/black pen. Lower the filling density or size lower the response threshold and vice versa.

The parameter value is set accordingly between 5 to 50.
Default is 30 for process having full pen filled bubbles.
In case of pencil filled bubbles, decrease threshold to 15-20.
In case of tick mark, decrease threshold to 5-15.

Skip Threshold (Upper, Lower) [0-100]

Upper Skip Threshold is used to detect over filling. It is not for general use of all users. It is effective in case of certain users only who have customized software.

The Upper Skip Threshold value is set accordingly between 50 to 100.
Default value is 0 for no detection.
Lower Skip Threshold is used to detect under filled bubbles that had substantial filling but have been marginally skipped due to not meeting the Response Threshold. It is of good help to decide the threshold value. It is effective in case where the filling in most of the lot is inappropriate or varies a lot because of use of Pen & Pencil both..

The Lower Skip Threshold value is set accordingly between 0 to Response Threshold.
Default value is 50% of Response Threshold for more careful detection.

Key1 Length [0-10], Key2 Length [0-10]

Set the LENGTH and RANGE of Candidate ID and Test ID fields, in case they are fixed in your institute. This will help in additional vigilance of erroneous filling of sheets.

Read Margin [Top, Bottom, Left, Right]

This parameter is used to clip off dirty edges or unwanted area of the scanned images. It distance from the edge of the page/image measured in pixels. Too tight margins leaving little space outside index points are not recommended. However, in case of machine readable sheets margins are kept tight to eliminate timeline.

To be adjusted as the case may be for current scanning lot.
Default value is 10,10,10,10 i.e. 10 pixels for all directions.
(Ver 15: Margines can be adjusted by dragging. This value based manual setting has been removed.)

OCR Read Angle [0,90,270]

This parameter is used to read rotated/vertical OCR fields at 90 or 270 degrees.
Default value is 0 for reading horizontally printed values.
(Ver 15: OCR/ICR at any angle can be read. This setting has been removed.)

Maximum Acceptable Skew (in pixels)

Sometimes due improper placement in scanner or scanner defect the images are formed rotated. While sometimes due to defect in the scanner roller mechanism, the images formed are distorted as a parallelogram. This distortion/skew defect is different from being a rotated image.

The software has arrangement to attend and correctly read rotated / skewed images. Almost even in heavy skews/rotations, the software reads the image correctly, but beyond a certain degree, it prompts the user for manual verification of what it has read.

To activate the alert beyond a skew limit of 10 pixels set the value to 10.
It can be set to 20 for less prompts.
Default value is 10 but this is for high sensitivity to distortion.

Store Images Into Database [0=No; 1=Database+Folder; 2=Folder]

In order to save the image of an answer sheet or a form for later reference or resolution of erroneous cases, enable this feature. The corresponding stored images of the sheet will be seen at the Manage Data panel when a read record is selected.
Though enabling this feature increases the size of the read database (OMRVALUE file) manifold.
Certain forms contain image/picture blocks which are scanned and stored as it is without being converted into tabular data. The images of all the picture blocks are also stored in the FORMPHOTO folder at the DATA location.
The name of each image being as BlockID-FormID.BMP

Default value is 0 for no image storage.

Multipage Sheet Suffix (S1, S2)

In case of two sided sheets scanned using a duplex scanner, the front and the backward images are linked by the same name separated by a suffix. The second side of the sheet is usually created using the suffix which the software recognizes to attach the read values of both sides.

When we have to read Duplex sheet, generally we use suffixes A, B
Default value is BLANK.

Index Point Size [Width, Height]

This parameter is used to detect the index point of the given size. Upto version 11 the index size was 10X10 pixels, since version 12 it is possible to have smaller index points upto 3X3 pixels. It is also possible to have rectangular index points as 10X3 pixels.

The smaller the index the greater is the ruggedness in case of skew or rotated sheets. But on the other hand, smaller index points require absolutely clean scanning with no stray marks. In case a sheet having smaller index point is read using higher value of this parameter then it will give the message of invalid index.
Default value is 7,7

ID Replace 1/2/3[0=Off/Column No, Values=V1|V2|...]

To obtain alphabetical form IDs, alphabet/general block can be used. To obtain numeric form IDs, numeric block can be used but to obtain alphanumeric form IDs, we use a Numeric Block with special arrangement to replace the numeric values of some column to alphabetical value. In current version upto 3 columns can be replaced with alphabets. This feature is only available with form ID field.

To read a column as alphabet, enter the column number separated by comma and followed by 10 values that would appear as replacements of 10 numerical values each of them separated by pipe "|".

For example to obtain a form ID like F2010M, do as follows:
Insert a 6 column numeric form ID block on your sheet layout.
Set the "ID replace 1" parameter value to- 1,A|B|C|D|E|F|G|H|I|J
Set the "ID replace 2" parameter value to- 6,M|N|O|P|Q|R|S|T|U|V

Default value is 0 for no replacements.

Auto ID [0=No; 1=Yes; 2=Yes+Chk]

To provide Auto system generated unique ID for each and every sheet.

Leading Zero ID on Read [0=No;1=Marked;2=Always]

To read Leading Zeros in the field of Form ID or Candidate ID.
For eg. 0001, 0002 etc

Color To B/W Threshold [1-255]

This is colour or contrast sensitivity. Colour sheets containing tick marks and pencil filled bubbles need to suppress the outline of background circles or boxes to detect even the slightest marks. Higher the threshold, lower the background colour sensitivity and vice versa.

The parameter value is set accordingly between 1 to 255.
Default is 128 for process having light pink bubbles.

Display Read Indicators [0=No; 1=Yes; 2=Design; 3=Skip]

This will help you to spot what software is reading with the help of color coding.

If the value is set to one only green indicators appear only at the bubbles that have been read.
If the value is 2, yellow indicators appear at all locations where the software has searched for a bubble.
If the value is 3, red indicator will appear at bubble which is filled more than Lower Threshold and because of which this sheet is being alerted.

Default Sheet Dpi

Lowest 100 Dpi is acceptable to the software. 100 Dpi is also suggested for speedy scanning, light images and quick reading. Default is 100. Software converts all sheets to 100 Dpi while reading.

Some sheets are required to be read at higher 150 or 200 Dpi for the sake of barcode or image. The parameter value is set accordingly either 150 or 200.

Auto Accept Skewed Sheets

Software will automatically accept without showing alert, the images which are detected as skewed (beyond Maximum Acceptable Skew) but the count of bubbles read at variable thresholds is same.

Default Read Mode [0=Auto; 1=Alert; 2=Manual]

You can set the mode of reading according to your requirement.

Continuous Reading [0=No; 1=Yes, Prefix]

Software will automatically read the sheets having a given "PREFIX" within the folder. This feature is used for automatically and continually reading sheets as soon as they are scanned.

Check Index Point in Vertical (LT, RT, LB, RB) [0=No; 1=Yes]

Ideally Software approaches index point horizontally. By this setting software will approach the index in vertically.
(LT-Left Top, RT-Right Top, LB-Left Bottom, RB-Right Bottom)

Search Margin (LT x,y; RT x,y; LB x,y; RB x,y;)

Distance till which the software will search index point from the corner of the sheet.

Read/Sort from Sub Folders [0=No; 1=Yes, Prefix]

Software will automatically read the sheets having a given "PREFIX" within the folder and all its subfolders. This feature is used for automatically and continually scanning folders of different groups/branches/cetnres under the same test.

REPORTS & OUTPUT SETTINGS (STEP 4)

PREFERENCES	
SETTINGS > OMR PREFERENCES PANEL	✕
PARAMETER	VALUE
USE TIMESTAMP IN EXPORT [0=NO;1=YES]	1
EXPORT TO[0=CSV;1=Excel;2=Access;3,4=dBase;5=XML]	1
RANKING PATTERN [0=REGULAR; 1=SKIPPED]	0
DIGITS FOR TEST SERIES[1,2,3]	1
IDI SAMPLE SIZE [1-50%]	25
CALCULATE R/W/L/C FOR ANALYSIS [0=NO;1=YES]	1
CANDIDATE FIELD CAPTIONS	CANDIDATE ID,CANDIDATE NAME,FATHER,GROUP,OTHER
SET MINIMUM MARKS [0=NO;1=YES,MARKS]	0,0
SHEET EXPORT COUNTS [0=ALL;TOP N]	0

Use Timestamp in Export [0=No; 1=Yes]
If the value is 0, the exported file will be replaced every time we export. If the value is 1, a new file with latest time stamp will be created.

Export Format [0=CSV; 1=Excel; 2=Access; 3,4=Dbase; 5=XML]
Select suitable value to set required output format as default.
Default is 0.

Ranking Pattern [0=Regular; 1=Skipped]
Regular Ranking pattern – If more than one candidates have same score, they are given same rank. The next rank is in subsequent order. While in case of skipped rank the next as many rank are skipped as many candidates are there on the same rank.

Digits for Test Series [1,2,3]
Multiple sets tests can be formed not only with 3 or 4 sets, upto 999 tests.
Usually there are 3-4 question papers forming sets of a test, hence the value is set to 1.
If there are 20 test papers linked in a series, then the value must be set to 2
In case the test ID is long, then set the value accordingly.

IDI Sample Size [1-50%]
The value defines the % of candidates to be considered from the top and bottom of the score list to draw Item Discrimination Index.

Calculate RWLC for Analysis [0=No; 1=Yes]
Calculating RWLC details for all graphical analysis reports may be very hefty for the system. So this process can be skipped, if not required.

Candidate Records Field Captions
The headings of the candidate table can be changed according to organization. This has no programmatic significance, bt can be done for the users visual convenience.

Set Minimum Marks [0=No; 1=Yes, Marks]
If a candidate has scored less than the specified marks, then he will get atleast minimum marks.

**Sheet Export Count [0=All; Top N]**
Sheets can be exported to smaller compressed size in JPG format while export of CSV Question Response data.
This will provide smaller size of images to be uploaded in Online Results system on the website.
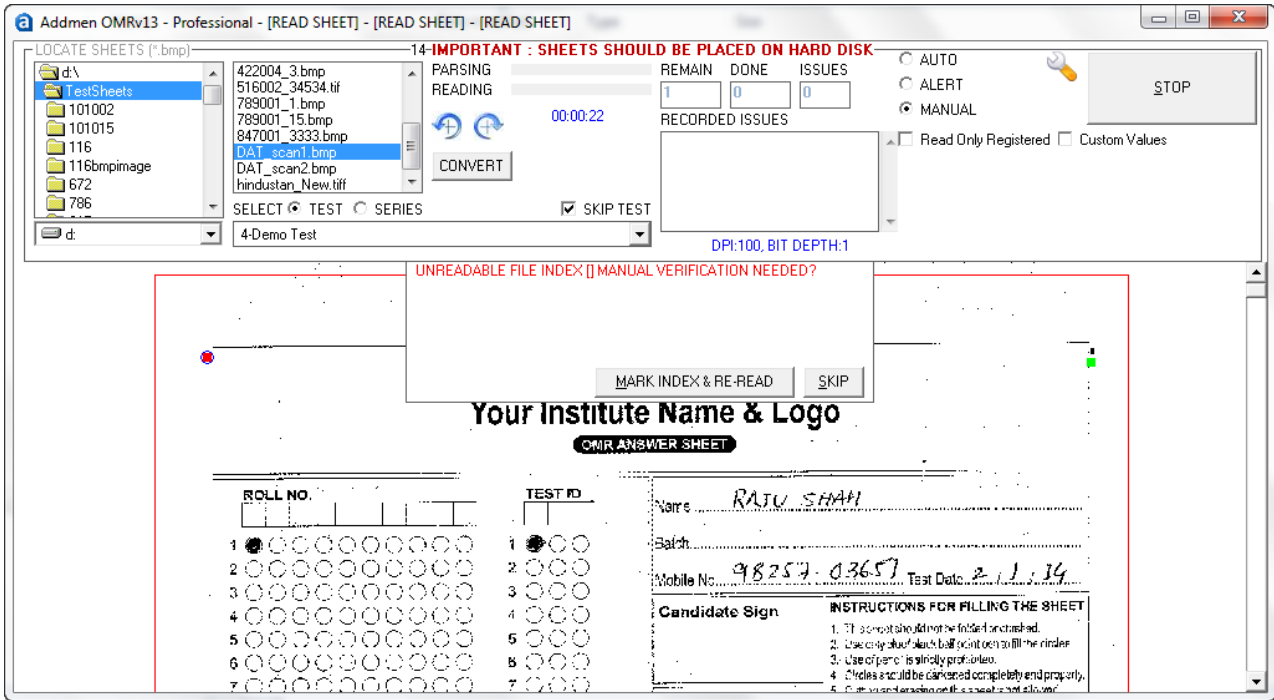
8. ADDED FEATURES OF OMR ADVANCED VERSION

Data can be altered at reading time in manual mode
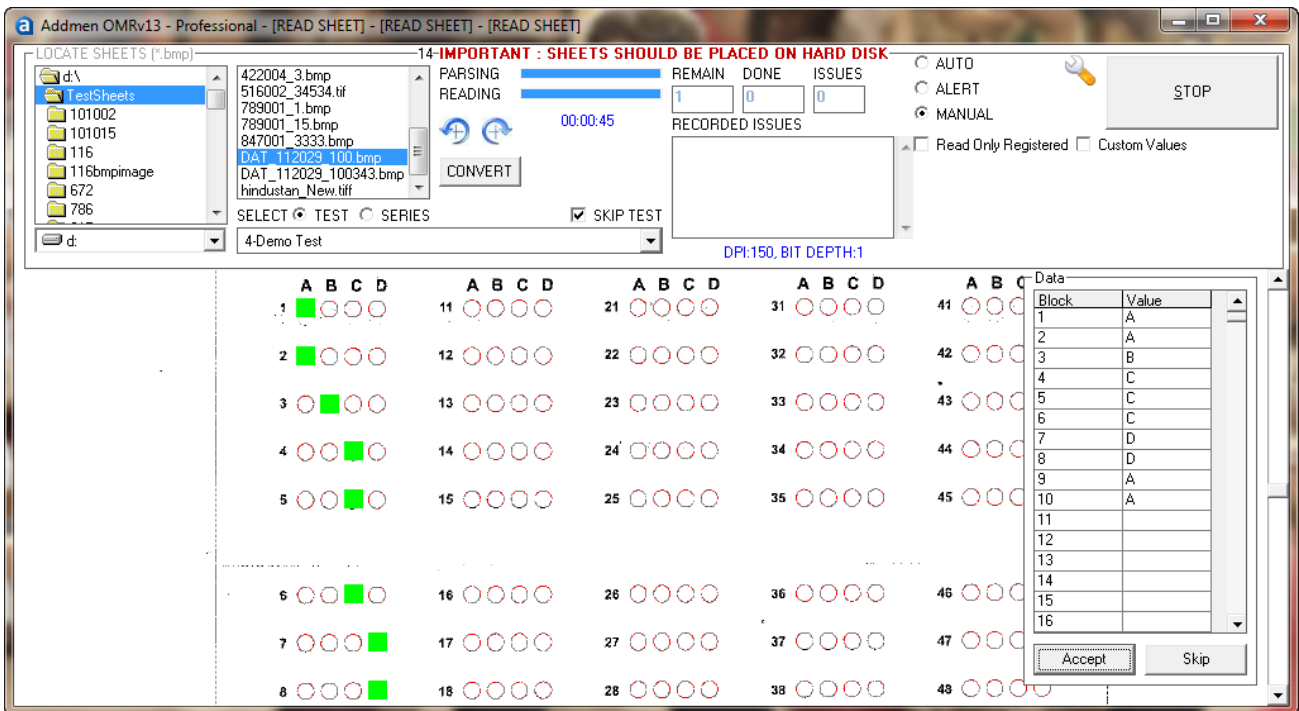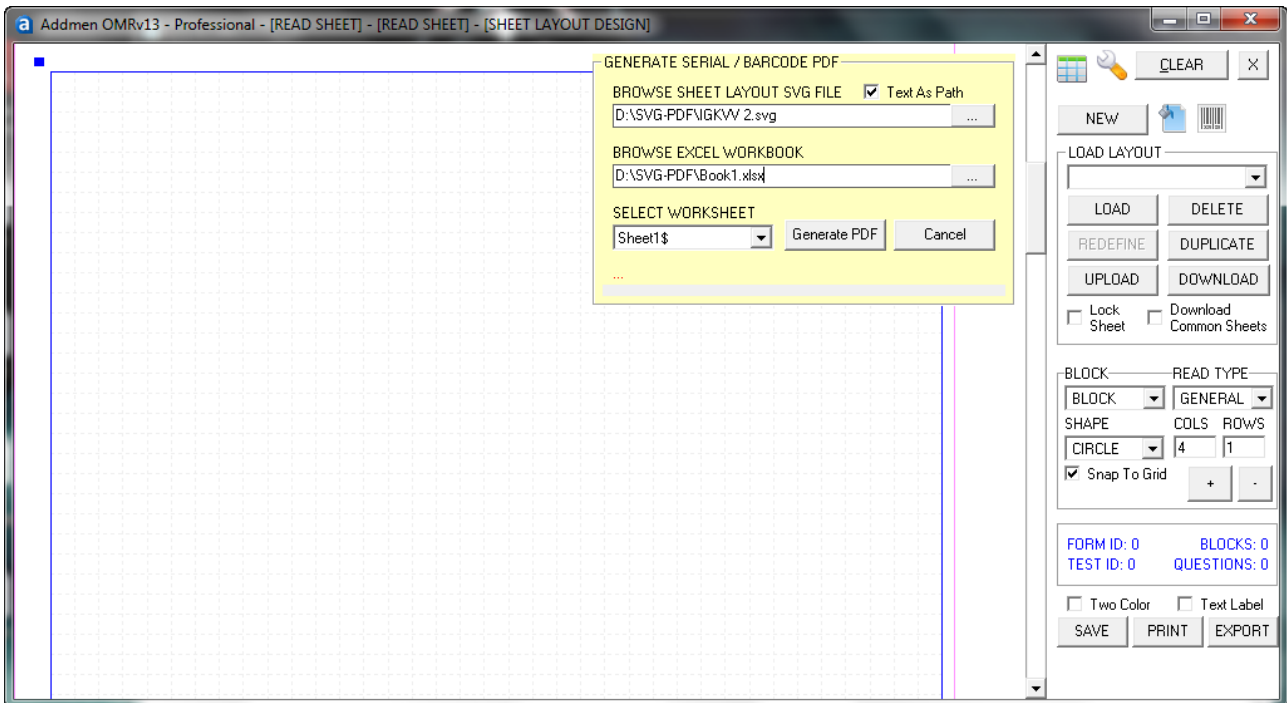

Sheet with miss-placed/miss-aligned column and rows can be calibrated
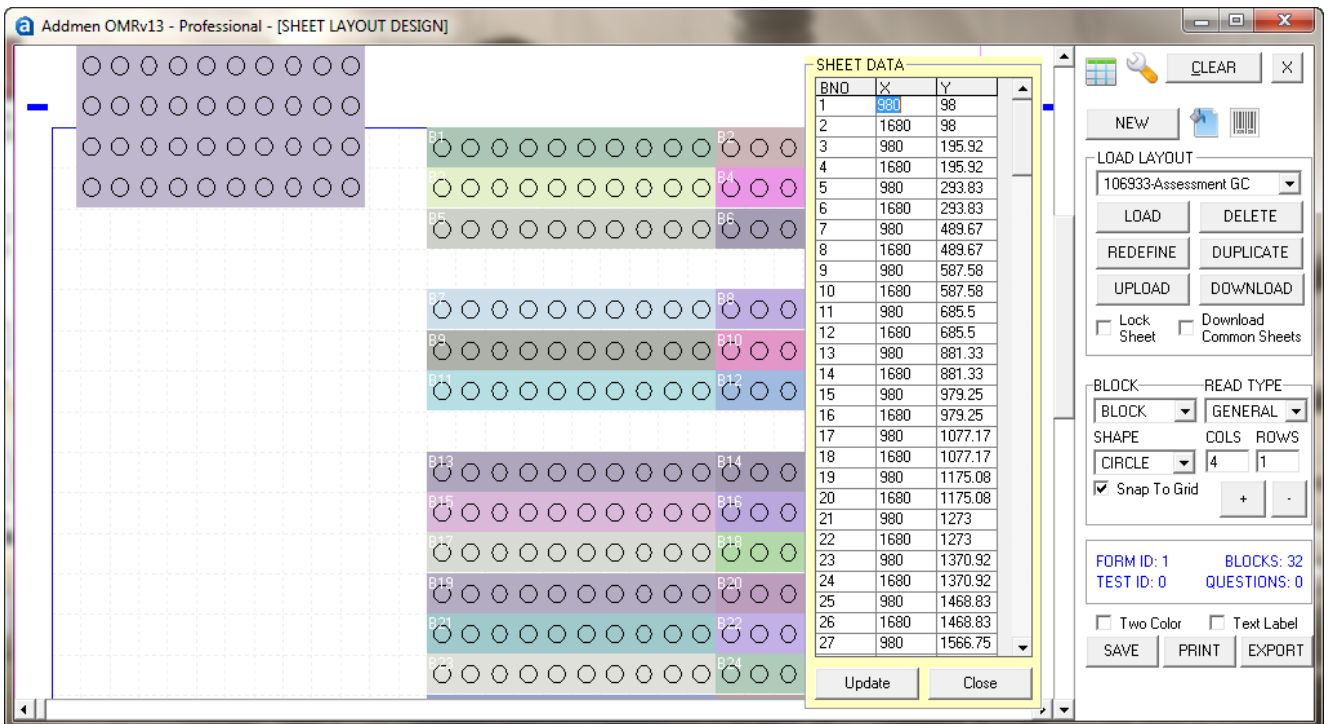
An inappropriate/unidentified index point can be pointed or virtually located by manual judgment this avoids re-scanning of miss printed sheets

Variable data can be printed in OCR/Barcode blocks

SQL database used in backend for efficient processing.

9. ADDENDUM FOR SPECIAL PROCEDURES / NEW FEATURES

How to cancel a filled response ?

This question wouldn't arise if a pencil was used to fill the OMR sheet. Generally the examination bodies that chose to allow the possibility of changing the answer key, they instruct to use the pencil. This was mostly the procedure is starting years of propagation of MCQ type objective exams. Even today pencils are used in some exams but mostly for exams of junior grade students. But if pencil is to be allowed then the OMR answer sheet has to be colored OMR sheet to allow for color dropping and contrasting of lighter for pencil marks for proper reading. So there is a limitation.

Now a days, self-designed and printed OMR sheets are in use. Most users use black and white OMR answer Sheets printed on your own laser printer. Use of pencil is not suggested on a black and white OMR sheet. So the students are instructed to fill with pen. Also, in order to keep the task simple for the examination body and to avoid any contentions, the examination bodies have now started to make the use of pen as mandatory.

The examinations that instruct to make use of pen do not obviously expect the candidate to change the response once marked. But in any case if it is at all required to change the response marked with pen then following two options provide remedy. Addmen OMR Software has both these provisions.

First Approach example : 'A' changed to 'C'

This approach already exists in the current version. However the sheet design procedure is a little different, where the bubbles are placed more distant and concentric circles are placed over them.
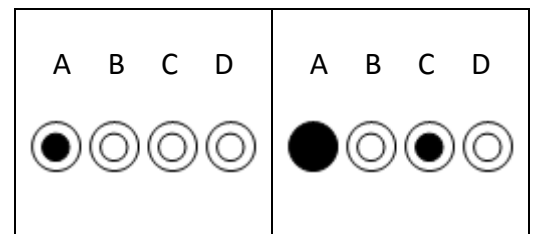
This is the best approach for cancellation of response as the structure of the sheet still remains quite same as the simpler version of basic sheet, with the only difference being of concentric bubbles. So it is less space consuming and not at all difficult or confusing for students.

Second Approach: 'A' changed to 'C'

Second approach has been introduced in the upcoming version 16. In this provision to cancel a filled response, there are two alternate rows of questions. The first row is for correct response marking and second row is for cancellation of the response marked in the first row. Since this method requires much more space than its simpler basic counterpart, so it is not suitable for OMR answer sheets where there are large number of questions.
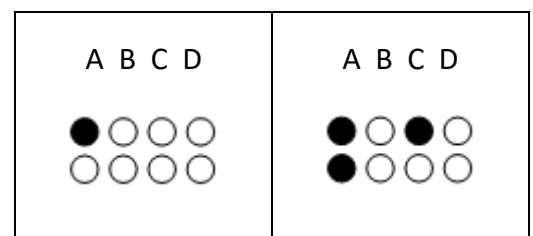
Secondly the sheet layout and question location also takes an altogether different layout, so there are quite many chances of students getting confused and marking the bubble in the wrong row. Still this approach has been found to be more suitable by some users.