Hackathon

Methods to Digitalise Marks Input using Modern Technology

About Hurrey

Hurrey is a Super App built to individualise & maximise the learning experience of every classroom. At Hurrey, we facilitate digital infrastructure and digital architecture for the school education system. We evolve from a deep understanding of differentiated learning needs for each student and employ Artificial Intelligence (AI) to recommend remedial content that is tailored to the learning needs of the individual students. We are built upon the foundational blocks of barrier-free digital architecture for Classrooms and learning ecosystems.

Problem Statement:

The current method of entering question-wise marks obtained by the students in an assessment is manual and tedious. Hence, we are looking for an innovative idea to digitize the process of entering marks in an Application that helps the teacher to enter question-wise marks obtained by the students in a class assessment. The teacher should be able to enter the marks in the most time and energy-efficient manner using the latest technologies like ML, DL, NLP, etc. using mobile or laptop.

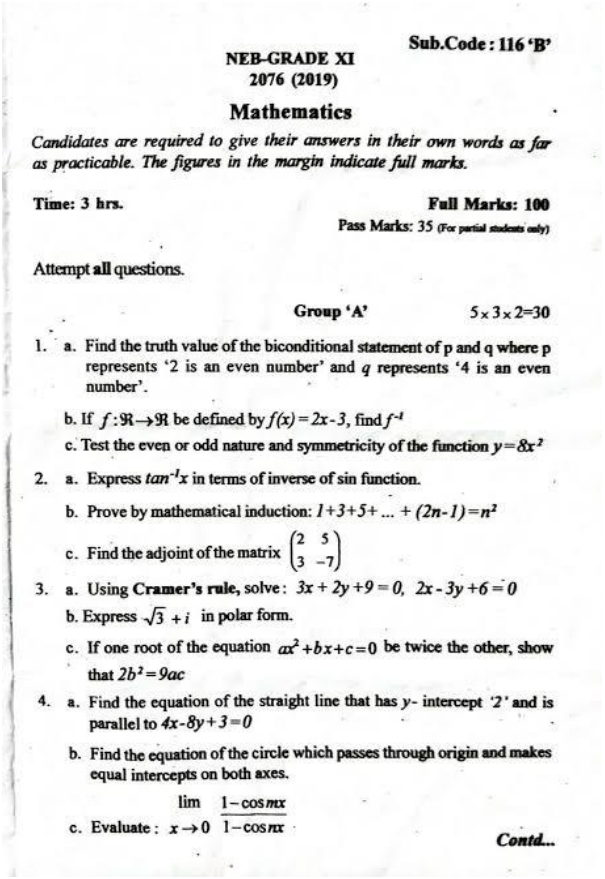
Sample Scenario

Consider a teacher who is handling mathematics for a class of 500 students and conducting an assessment for the same. The assessment consists of 100 questions which can be of any type (MCQs, True/False, Subjective, etc). After completion of the assessment, the teacher/checker/evaluator checked the answer sheets.

Example: Let us say, Mona got 5 marks in Q1, 3 marks in Q2, 4 marks in Q5, and so on, and left blank questions as well. Now the teacher should enter this data into an application using the approach that you provide. Also, keep in mind that the teacher should follow the same approach for the rest of the class as well.

Make sure to create a mobile and web interface to input the numbers obtained question-wise in the most time-efficient manner. **Input time for every answer sheet of 100 questions should be less than 5 mins.**

Sample Question Paper:



Sub.Code : 116 'B'

NEB-GRADE XI
2076 (2019)

Mathematics

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Time: 3 hrs. **Full Marks: 100**
Pass Marks: 35 (For partial students only)

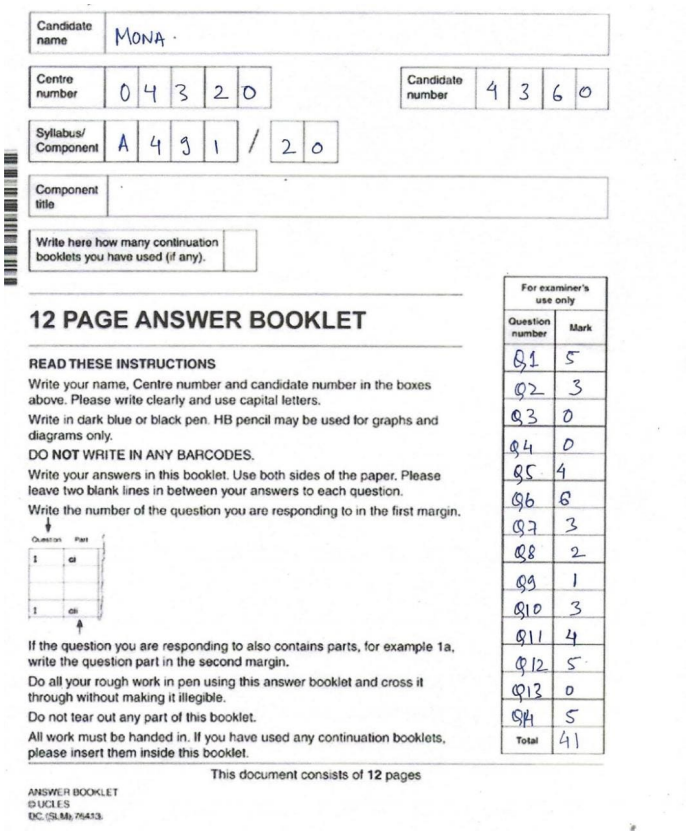
Attempt **all** questions.

Group 'A' $5 \times 3 \times 2 = 30$

1. a. Find the truth value of the biconditional statement of p and q where p represents '2 is an even number' and q represents '4 is an even number'.
   b. If $f : \Re \to \Re$ be defined by $f(x) = 2x - 3$, find f^{-1}
   c. Test the even or odd nature and symmetricity of the function $y = 8x^2$
2. a. Express $\tan^{-1}x$ in terms of inverse of sin function.
   b. Prove by mathematical induction: $1 + 3 + 5 + \ldots + (2n-1) = n^2$
   c. Find the adjoint of the matrix $\begin{pmatrix} 2 & 5 \\ 3 & -7 \end{pmatrix}$
3. a. Using **Cramer's rule**, solve : $3x + 2y + 9 = 0,\ 2x - 3y + 6 = 0$
   b. Express $\sqrt{3} + i$ in polar form.
   c. If one root of the equation $ax^2 + bx + c = 0$ be twice the other, show that $2b^2 = 9ac$
4. a. Find the equation of the straight line that has y- intercept '2' and is parallel to $4x - 8y + 3 = 0$
   b. Find the equation of the circle which passes through origin and makes equal intercepts on both axes.
   c. Evaluate : $\lim_{x \to 0} \frac{1 - \cos mx}{1 - \cos nx}$

Contd...

Traditional Data entry process followed by teacher



Candidate name: MONA

Centre number: 04320 | Candidate number: 4360

Syllabus/Component: A491/20

Component title:

Write here how many continuation booklets you have used (if any).

12 PAGE ANSWER BOOKLET

READ THESE INSTRUCTIONS

Write your name, Centre number and candidate number in the boxes above. Please write clearly and use capital letters.

Write in dark blue or black pen. HB pencil may be used for graphs and diagrams only.

DO **NOT** WRITE IN ANY BARCODES.

Write your answers in this booklet. Use both sides of the paper. Please leave two blank lines in between your answers to each question.

Write the number of the question you are responding to in the first margin.

Question | Part
1 | a
1 | ai

If the question you are responding to also contains parts, for example 1a, write the question part in the second margin.

Do all your rough work in pen using this answer booklet and cross it through without making it illegible.

Do not tear out any part of this booklet.

All work must be handed in. If you have used any continuation booklets, please insert them inside this booklet.

This document consists of **12** pages

ANSWER BOOKLET
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For examiner's use only

Question number	Mark
Q1	5
Q2	3
Q3	0
Q4	0
Q5	4
Q6	6
Q7	3
Q8	2
Q9	1
Q10	3
Q11	4
Q12	5
Q13	0
Q14	5
Total	41

Here is a sample data entry that needs to be obtained from your model.

Student Name: Mona
Class: XI - A

Question No.	Marks obtained
Q1	5
Q2	3
Q3	0
Q4	0
Q5	4
Total	12

About Proof of Concept (POC):

- POC should be submitted both in the form of a complete web/mobile application or a working model with the code involved.
- Participants can use any kind of technology (ML, DL, NLP, etc) to provide the above.
- If the participant is unable to complete the POC, ideas, and approaches can be submitted in the ppt/doc format which clearly explains their vision and conveys the solution.

Perks:

1. Hackathon Winner will win up to 75,000 INR Cash prize
2. Certificate of appreciation for top 5 Ideas

Selection Criteria:

1. Idea submission should be done before **09/11/2022**
2. Clear Idea and Working Prototype
3. Even ideas will be considered but ideas with Working Prototype will get high priority
4. Parameters Considered:
    a. Idea submission: Novel and Innovative idea, Viable and feasible Solution
    b. Coding Skills: Coding just needs to be with Logical correctness

Submission:

1. The last date for submission is **09/11/2022**
2. The submission process will be sent to the registered email address

Contact Information

1. Participants can contact through email: sreekesh@hurreytech.com, rohith@hurreytech.com, karthik@hurreytech.com.