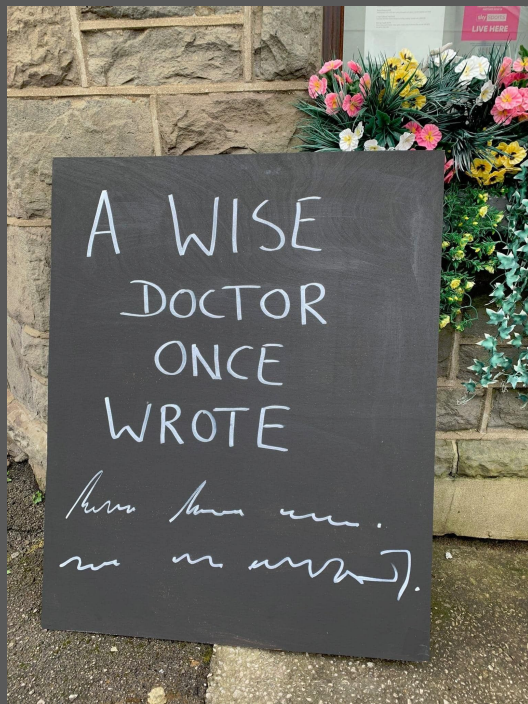


BACKGROUND



BACKGROUND

Why *should* doctors use digital prescription softwares?

Digital prescriptions enable:

- Better record-keeping (for doctors and patients)
- Following correct dosage more easily
- Acquiring correct medication more easily
- Tracking drug-allergy interactions
- Tracking drug-drug interactions

RESEARCH PROJECT PLAN

1. Develop research question
2. Literature review
3. Contextual inquiry
4. Heuristic analysis
5. Usability test
6. Low-fidelity prototype
7. High-fidelity prototype

RESEARCH PROJECT PROBLEM STATEMENT

Despite being aware of the numerous advantages, why are doctors in India not adopting digital prescription tools for their OPD practice?

LITERATURE REVIEW AND PROBLEM VALIDATION

“only a lean number of establishments have electronic prescriptions for outpatient clinics.”

Soni, A., Nagpal, S., & Mittal, A. (2020). E-prescription – Curbing the COVID-19! Indian Journal of Medical Sciences, 72(2), 119–121. https://doi.org/10.25259/IJMS_141_2020

“E-prescriptions are in early phase and practiced by a few private hospitals only”

Singh, Arjun & Yadav, Mukesh & Sharma, Amit & Mishra, Abhishek & Prakash, Ajay & Medhi, Bikash & Kumaravel, J.. (2020). E-PRESCRIPTION (CPOE) IN INDIAN HOSPITALS: A STRATEGY TO PREVENT PRESCRIPTION ERRORS.

CONTEXTUAL INQUIRY - SUMMARY

Out of 5 doctors visited,

- 5 had smartphone and computer proficiency
- 4 had a computer and printer set up in their clinic
- 5 had broadband internet/wifi at their clinic
- 5 were aware of e-prescription softwares
- 3 had previously attempted and abandoned using e-prescription softwares
- 0 used computer/printer to write prescriptions
- 5 wrote prescriptions on their custom-made letterhead
- 1 was willing to spend money to acquire e-prescription software

HEURISTIC ANALYSIS: COMPARATIVE STUDY

Applications analysed: Practo, Healthplix

Usability problems identified:

Practo

- Tedious sign-up
- No option to set margins
- No option to use custom letterhead
- Limited medicine database (some specialisations not fully covered)

Healthplix

- Tedious sign-up
- Margin spacing defined in pixels
- Print button not clearly visible
- Limited medicine database (some specialisations not fully covered)

MODERATED USER TESTING - FIRST TIME USERS

Tasks:

1. Sign-up and create profile
2. Add clinic details (address, timings etc)
3. Add patient
4. Create prescription
5. Add test reports
6. Print prescription

Average task success rate: **<20%**




ADOPTION CHALLENGES AND REQUIREMENTS

- First impression, i.e. Sign-up must be user-friendly
- Existing letterheads must be supported
- Interaction with patients must not be affected
- Transition from handwritten to digital prescriptions must be facilitated
- The solution must be free to use for doctors and patients

PERSONAL LETTERHEAD

5 out of 5 doctors used custom-made letterheads, on which they wrote prescriptions by hand.

Dr. Sandeep Gulati Director, NEO Hospital MD (Med), D.M. (GE) Senior Consultant Gastroenterologist and Endoscopist (Reg. No. - MCI 30704, DMC 4671)	 NEO HOSPITAL <small>NEO HOSPITAL</small>	A-2, Anand Vihar Vikas Marg Ext. Delhi 7.00 PM to 8.30 PM Monday to Saturday E-mail : drsgulati@hotmail.com (M) 9810073309
MEMBER : <ul style="list-style-type: none">American Society for Gastrointestinal Endoscopy (ASGE)Indian Society of Gastroenterology (ISG)Society of Gastrointestinal Endoscopy of India (SGEI)Indian Association for Study of Liver (INASL) NEO HOSPITAL D-170A, Sector 50, Noida Tel.: 0120 4880000 11.00 to 1.00 PM & 4.00 to 5.00 PM Monday to Saturday		
Facilities Available : Upper and Lower Gastrointestinal Endoscopy with Biopsy, Endoscopic Sclerotherapy, Endoscopic Variceal Band Ligation, Esophageal Stricture Dilatation, Foreign Body Removal, Liver Biopsy, Colonoscopic Polypectomy, Diagnostic and Therapeutic ERCP, Achalasia Cardia Dilatation, Esophageal / Enteric Stenting		

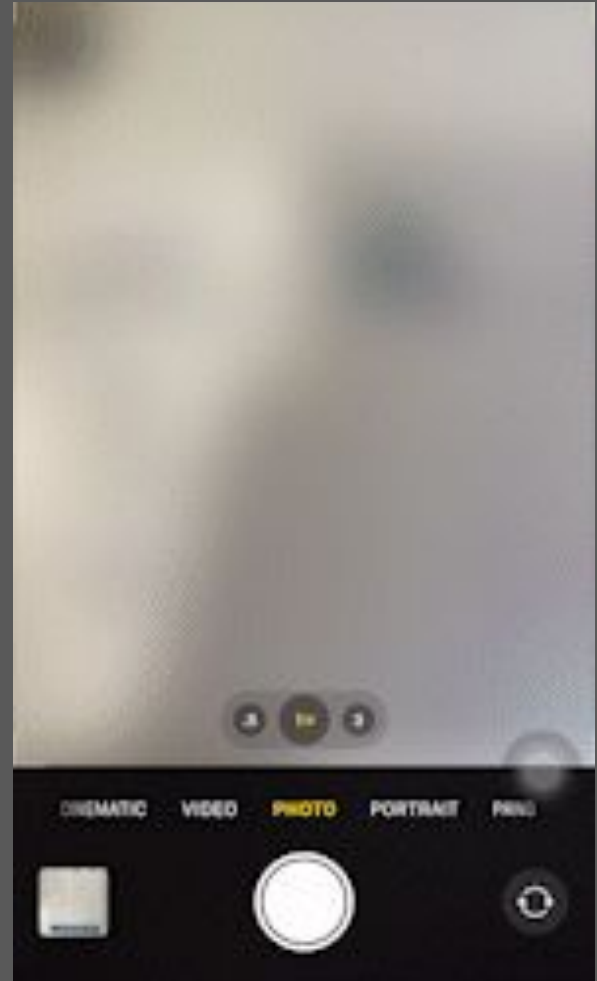
SOLUTION: HIGHLY SIMPLIFIED SIGN-UP AND PAGE SET-UP

Option to choose from 4 sign-up flows:

1. Smartphone only (recommended)
2. Desktop only
3. Combination of smartphone and desktop
4. Fully manual sign-up

OPTICAL CHARACTER RECOGNITION

Automated data extraction from printed or written text from a scanned document, which is then converted into machine-readable form for data processing.

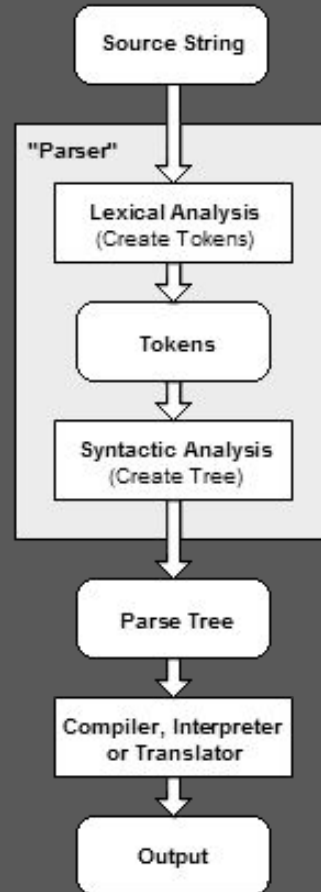


SCANNED INFORMATION PARSING

Parse:

analyse (a string or text) into logical syntactic components.

By parsing the text, the scanned information can be interpreted by an algorithm to automatically populate the different fields required for sign-up.



THANK YOU