



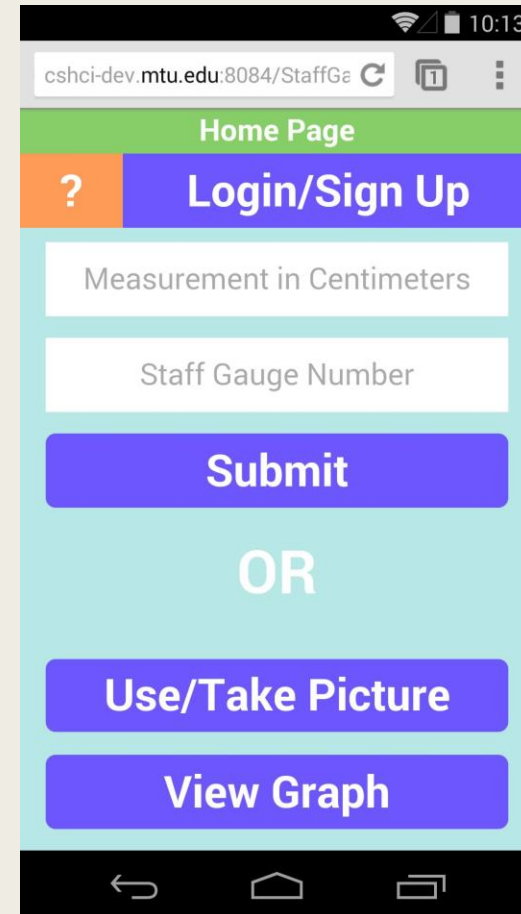
USABILITY TESTING: STAFFGAUGE

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StaffGauge

- Web App for citizen scientists
- Upload staff gauge hydrology Data
 - *Text: Manually*
 - *Picture*
- Visualize data
 - *Graphical view*
- User
 - *Research Scientist*
 - *Volunteers*

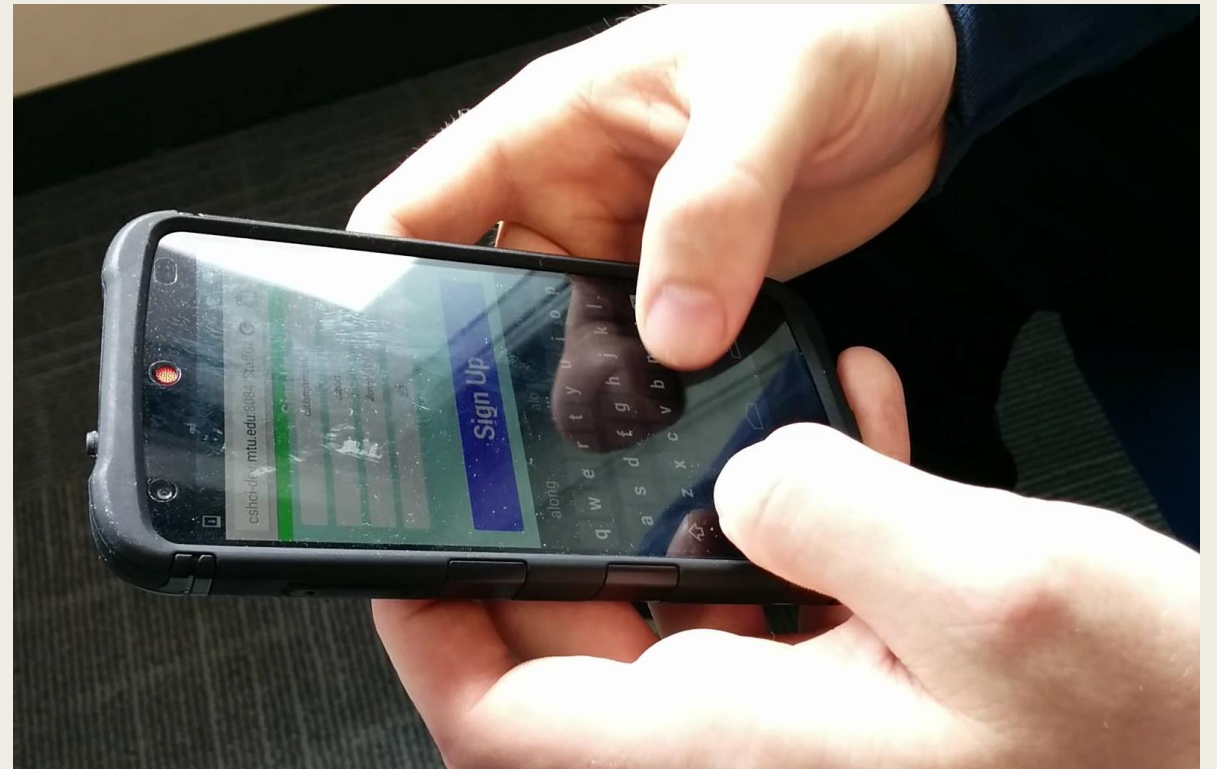


Concern

- Fast
 - *Task completion in less than 3 steps*
- Simple
 - *Comprehensible by any user*
- Efficient
 - *Function properly with fewest number of bugs*

Environment Setup

- Device: Nexus 5
- Version: Android (4.4.2)
- Mobile Web Browser: Chrome
- Observation:
 - *Notes*
 - *Video recording*
- Location: Rekhi 323
- Total 6 users



Issues

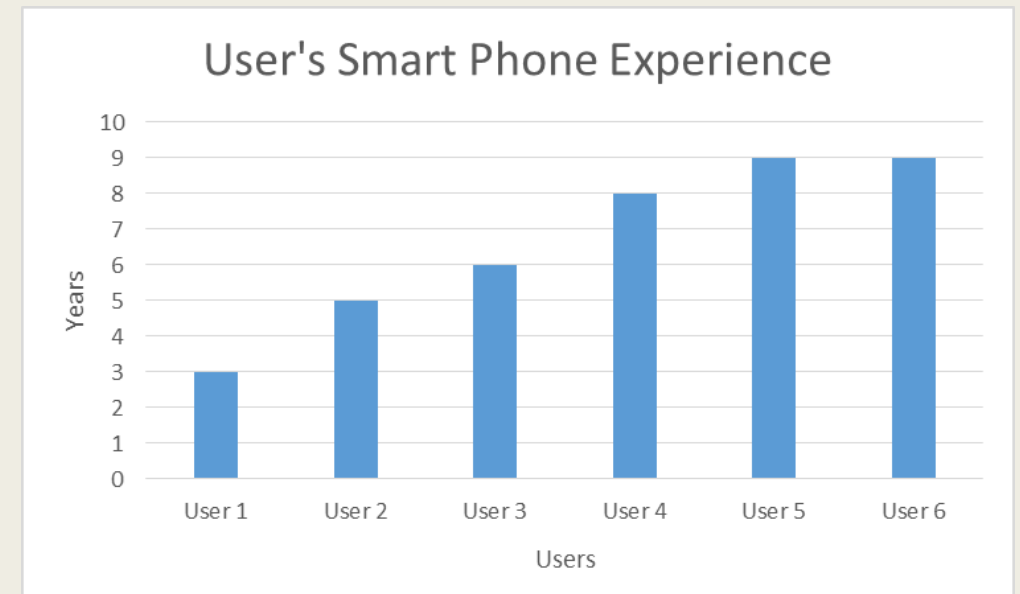
- Older version of Android
 - *Overlapping of buttons and text fields*
 - *Small font size*
 - *Small graph size*
 - *Double tap to submit*
- No backend support
 - *Email validity*
 - *Verify Graph and picture preview*

Type of data collect

- **Pre-test questions**
 - Ever used any similar type of web application
 - Expectation from the app
- **Post test questions**
 - Task completion in fewest steps?
 - Likes and dislikes
 - Suggestions for improvement
- **Quantitative measurement**
 - Total time to complete task
 - Number of taps to recover
 - Time and steps to recover from an error
 - In case of failure, measure the percentage of task completed
 - Number of buttons/pages not used
 - Number of times the user needs assistance
- **Qualitative measurement**
 - User's Facial expression
 - Spontaneous verbal expression
 - Level of attention towards the task

Pre Test Results

- Experience with similar app: 4/6
- Interest in testing:
 - *Strongly agree: 3/6*
 - *Agree: 3/6*
- Expectation from the app:
 - *Good data entry UI*
 - *Interesting UI*
 - *Understand water level based on input*
 - *Not sure*



Scenarios and Quantitative Measurement

Scenario	Task	Avg. total time (minutes)	Assistance	Avg. % of task completed	Unused Button /fields	Recovery time
Sign Up and Login	Task-1: Successfully create an account Task-2: Login with username and password	<8	2	0-50%	None	Quick
Upload text data manually	Task-1: Submit gauge reading and # Task-2: Only see graphical view	4-5	1	80%	None	Little slow
Upload picture	Take picture Retake picture and upload	2-3	1	100%	None	Quick

Post Test Query Results

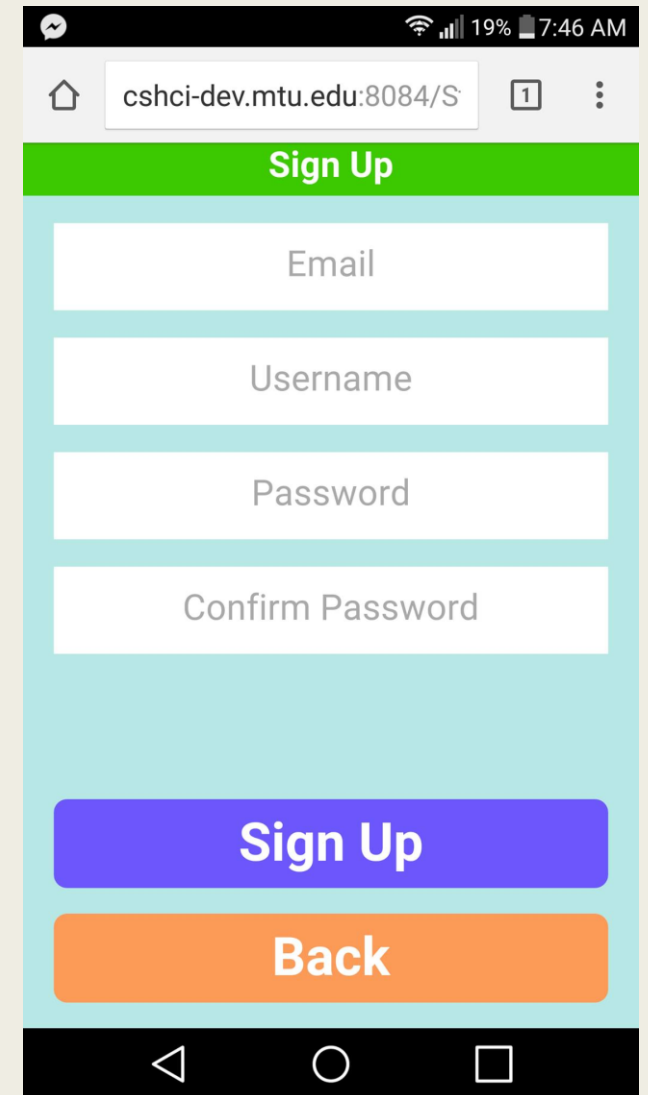
Average results:

Strongly Agree > Agree > Neutral > Disagree > Strongly disagree

- Easy to perform: Agree
- Enjoyed the app: Agree
- Use app again: Neutral
- Steps couldn't be any shorter: Agree

Test Results

- Sign up is not directed to Sign-up page
 - *Login and sign up in the same button*
 - *Sign up travels through the login page*
 - *Time consuming*
- Password format can only be known if a mistake is made
 - *Pop up message after submission*
- Avoid 'View Graph's submit button
 - *Tap back button*
 - *Think they've already submitted in the home page*
- Attentive in performing task but reluctant to read the pop up messages
 - *Skip useful info: time consuming*



Test Results

- User reluctant to read the pop up messages
 - *Skip useful info: time consuming*
- For graph view directly taps the 'graph view' button
 - *Does not insert 5 digit gauge #*
- For graph view does not tap 'view graph' button
 - *Taps the submit button after entering gauge #*
- Did not understand graphical view
 - *X-Y axis is not clear*
 - *Does not display user's gauge # and reading*

Bug Report

Bug #	Bug Name	Location	# of Users	Bug Description
1.2	Login without entering credentials	Login Page	2	Pressing Login button shows successful login even without entering Username & password
2.1	Submit without gauge reading	Home Page	2	For manual input, can submit without entering gauge reading
2.2	Accept gauge # without verifying	Home Page	6	For manual input, can submit gauge # of any digit -> No Checking
3.1	Retake picture direction	Picture Preview	6	Retake picture button directs to Home page instead of camera option

Suggestion

- Graph View -> Submit: Keep a **message** above the **submit button**
 - *“To complete your submission please press submit”*
 - *Change Home page submit button name to ‘Upload’*
- Display user’s gauge number and reading on the view graph page
- Direct the ‘**Retake Picture**’ button to the **camera** option instead of Home page
- After successful login **display profile info** (username) at the top
 - *Confirmation of login*
- Make **separate** buttons for ‘**Login**’ and ‘**Sign up**’
 - *User familiarity*
 - *Reduce time and steps*
- **Password format** should be mentioned above the password field
- Fix the bugs!!!!