



Tshwane University
of Technology
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TUT Labs Management System Proposal

A Smart Solution for Real-Time
Lab Monitoring and Scheduling
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Problem Statement

- .. Manual lab management leads to inefficiencies.
 - .. Tutors have no central way to manage shifts.
 - .. Admins lack visibility and communication tools.
 - .. No historical record of lab openings or closures.



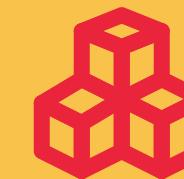


Proposed Solution

- .. A cross-platform mobile and web app.
- .. Real-time lab status updates (open/closed).
- .. Admin dashboard to assign tutors and manage schedules.
- .. Students can view lab status without logging in.



Key Features



.. Role-based access
(Admin, Tutor, Student).



.. Firebase integration for
real-time updates.
.. Schedule management
with visibility.



.. Lab announcements and
notes.

Future Implementations

01

.. PDF download
of lab status per
day.

02

.. Weekly reports
of lab usage
activity.

03

.. Notifications
and email
summaries.

04

.. Machine
learning
predictions on
usage trends.

Benefits to TUT FoICT

01

.. Better resource allocation and lab tracking.

02

.. Improved tutor accountability.

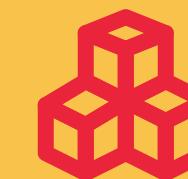
03

.. Enhanced communication with students.

04

.. Digital transformation aligned with TUT goals.

Proposal & Request



.. Officially support the adoption of this system.



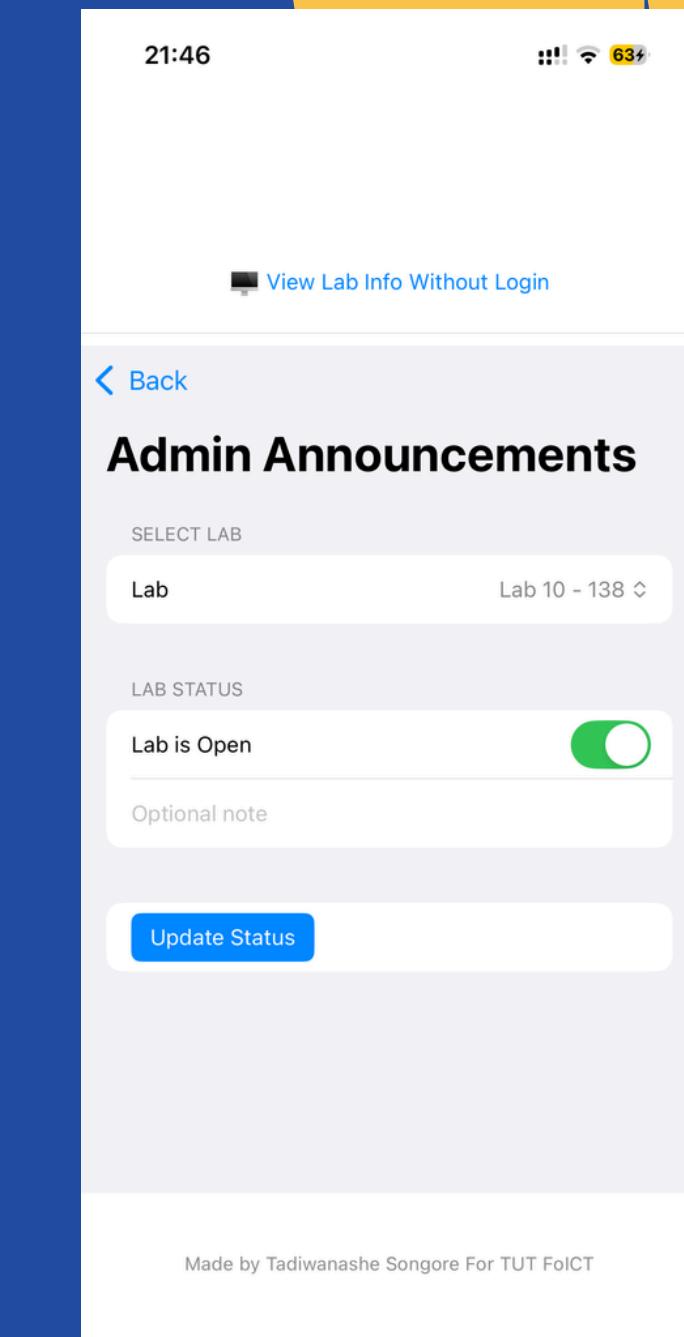
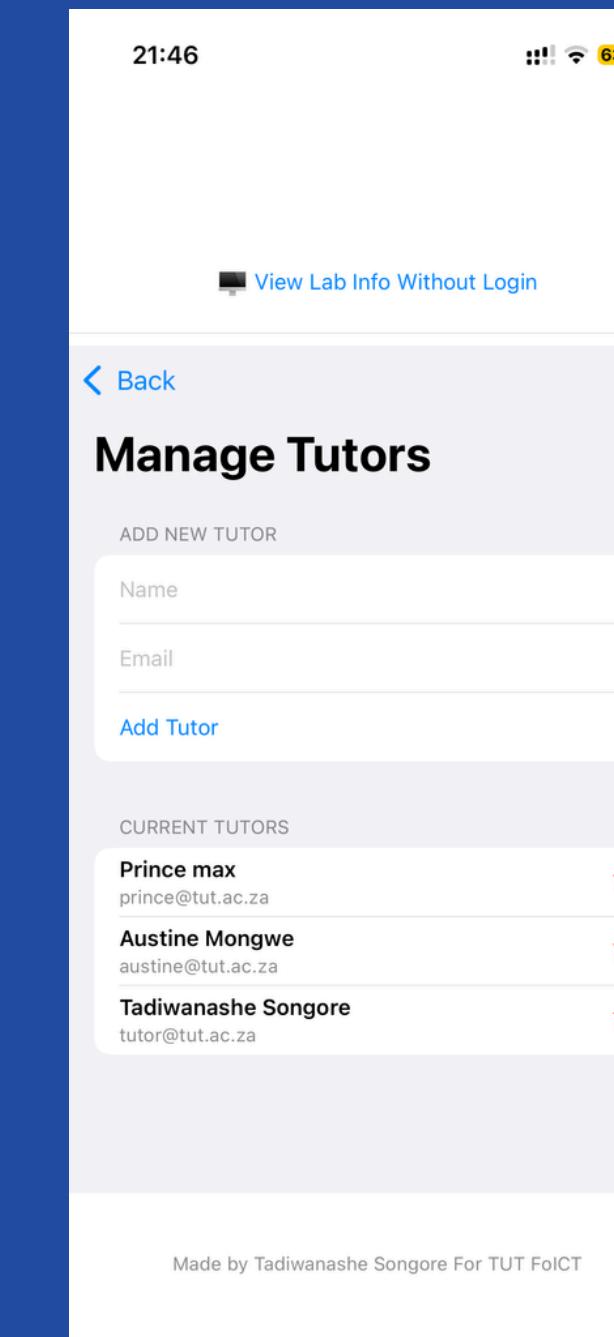
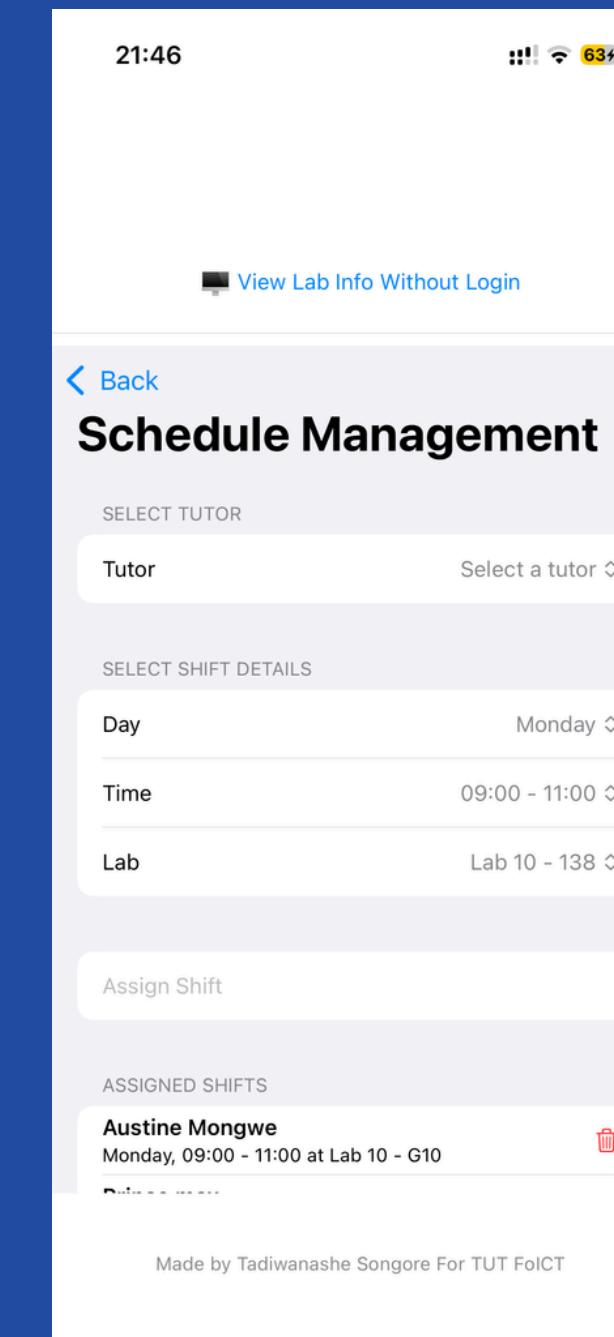
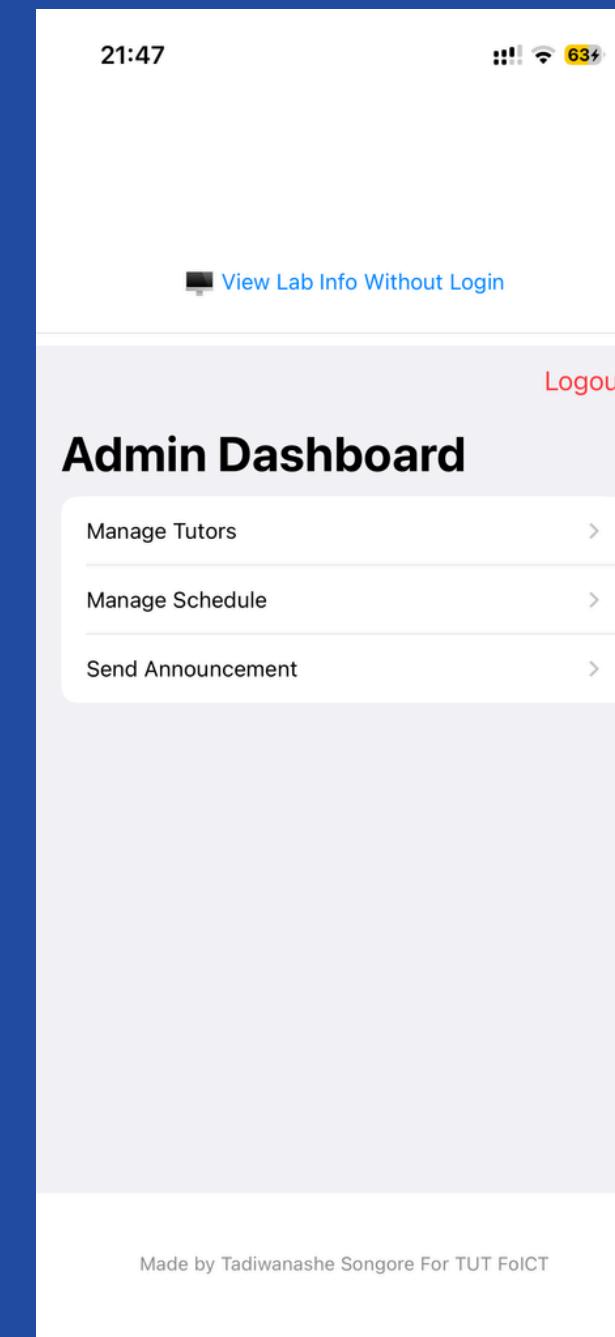
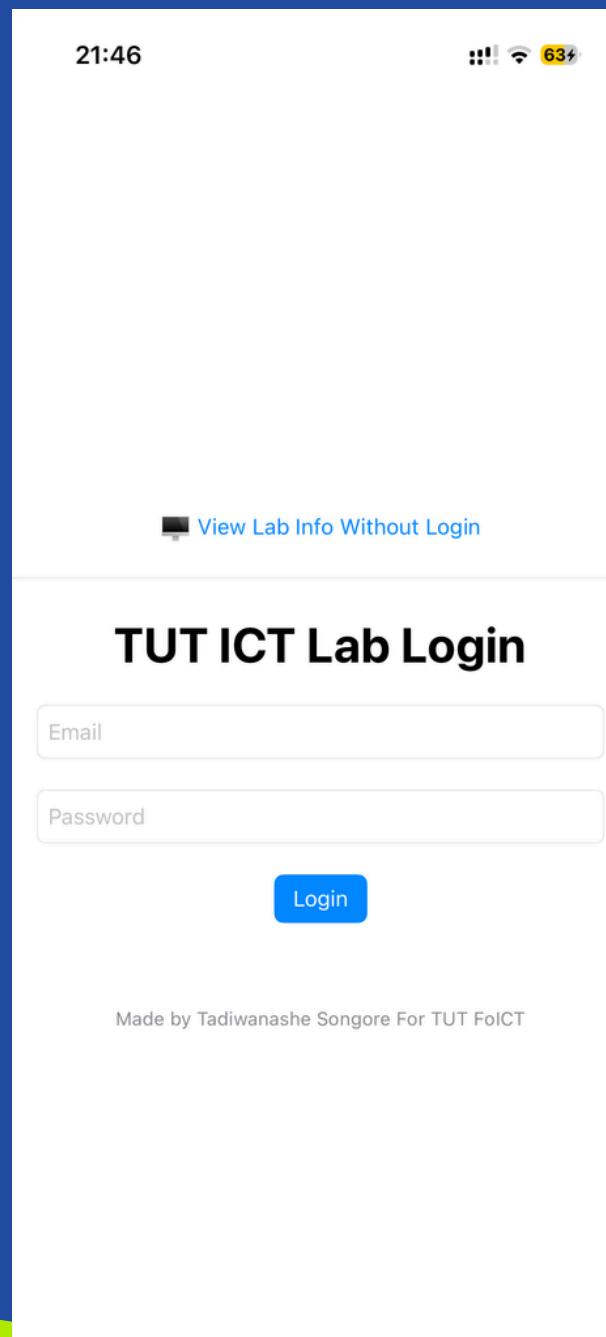
.. Grant access to relevant data and testing labs.
.. Collaborate to tailor the app to TUT's unique needs.



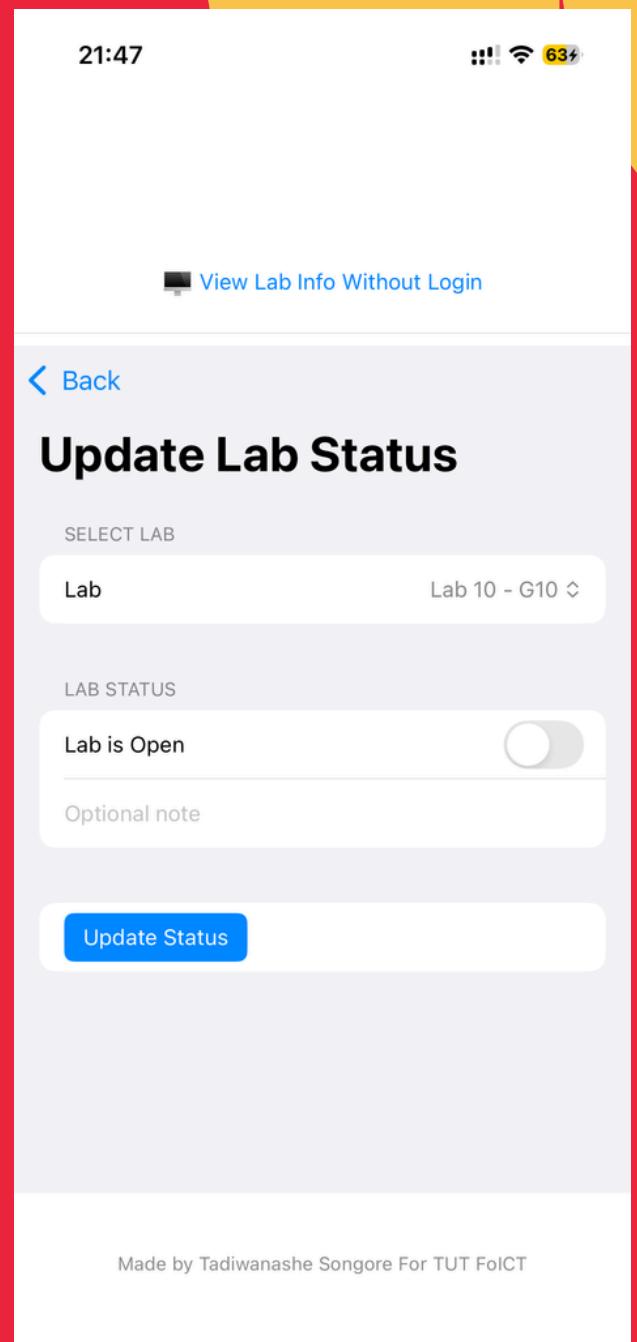
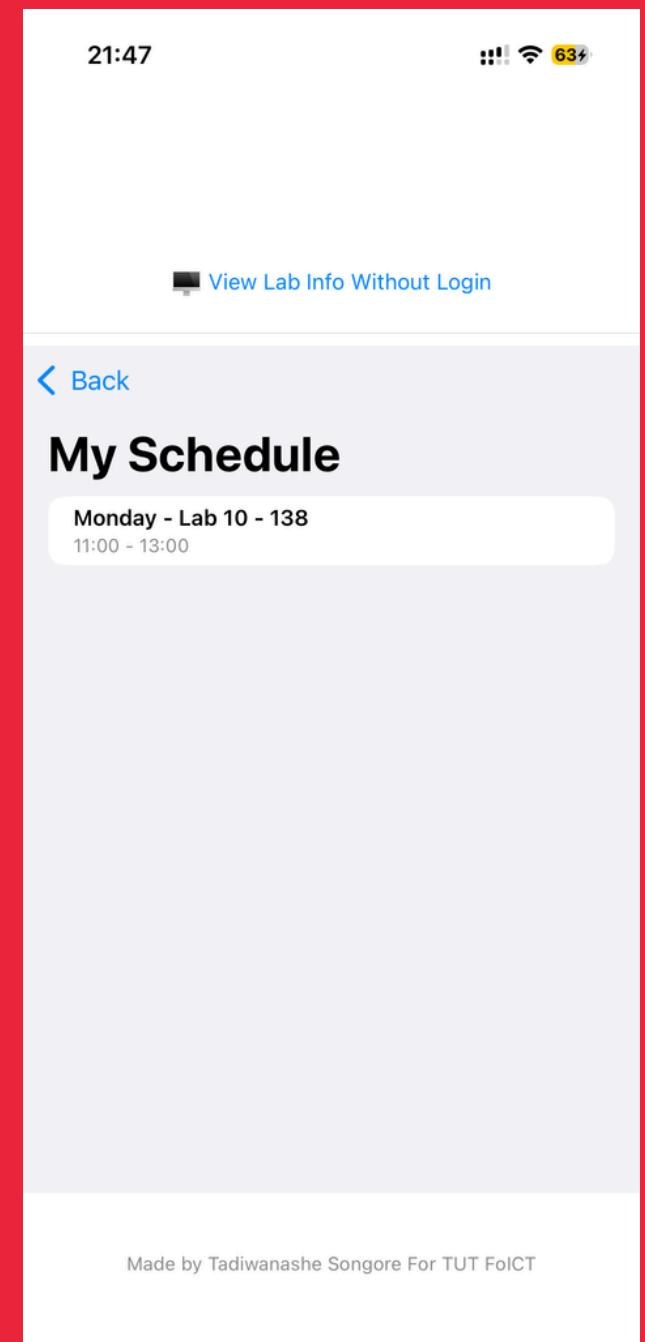
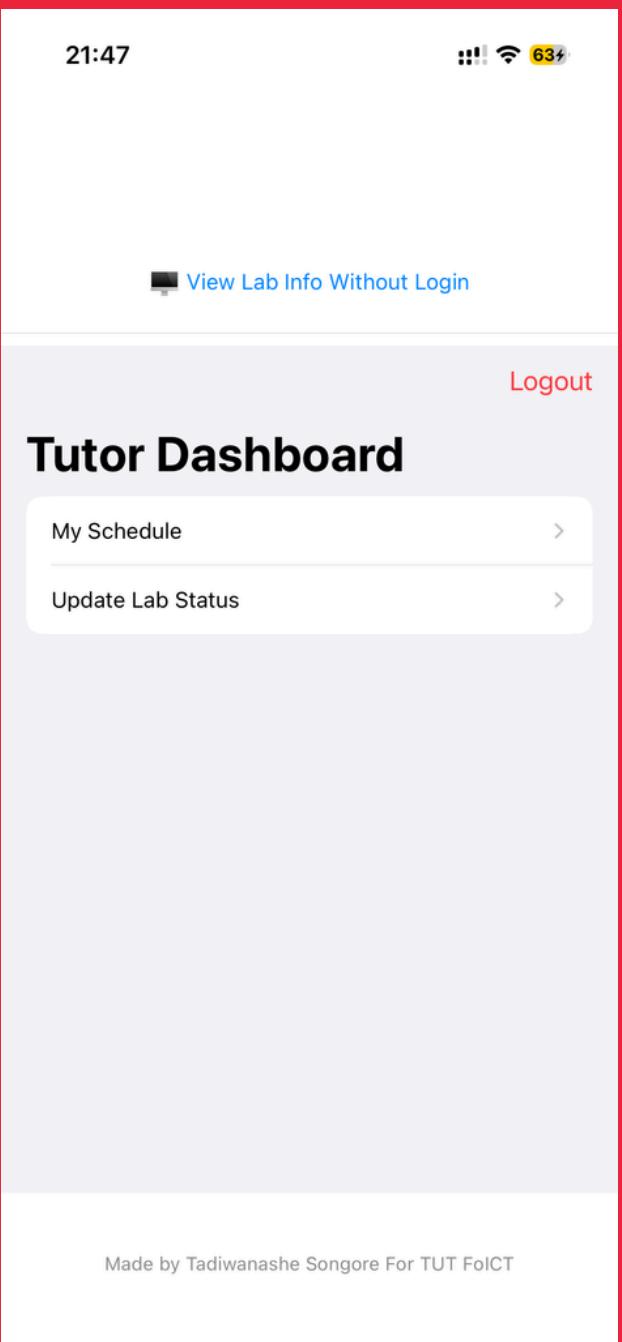
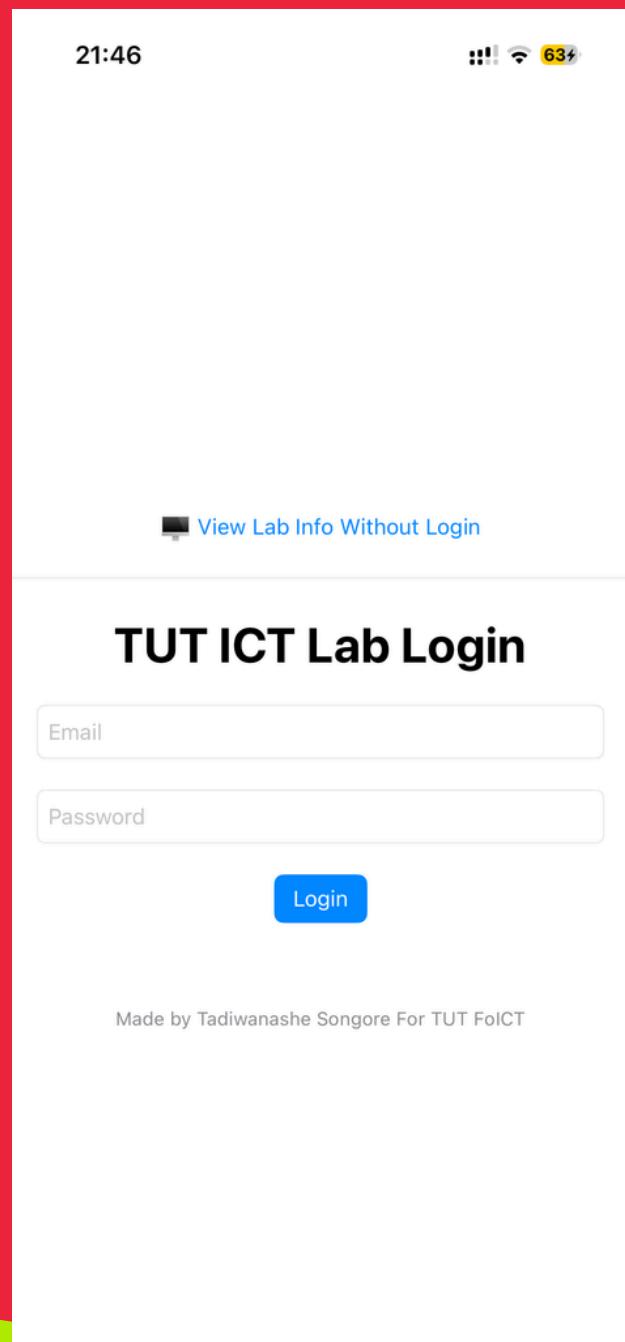
.. Consideration for a permanent software development position within the faculty



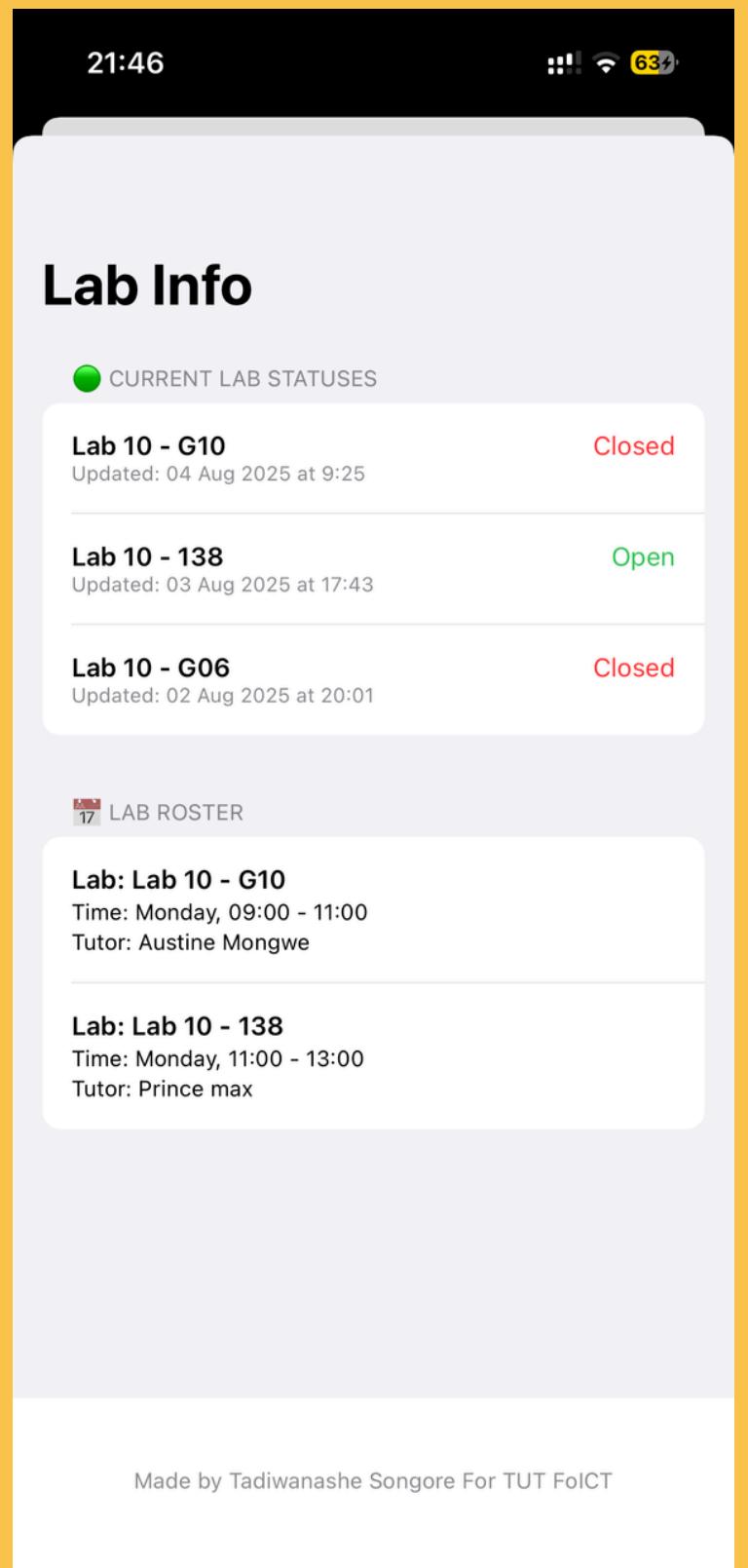
Screenshots Admin



Screenshots Tutor



Screenshots Student



Live Demonstration



THANK TOU

For watching this presentation

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