Learner Credential Wallet

Brandon Muramatsu, MIT

Overview

- Digital Credentials Consortium
- Verifiable Credentials
- Learner Credential Wallet
- Demo

We are building an infrastructure for digital academic credentials that can support the education systems of the future.

Read: Whitepaper | Credentials to Employment: The Last Mile

White paper: bit.ly/DCC-whitepaper

12 Founding Members

Delft University of Technology (Netherlands)

Georgia Institute of Technology (USA)

Harvard University (USA)

Hasso Plattner Institute, Potsdam (Germany)

Massachusetts Institute of Technology (USA)

McMaster University (Canada)

Tecnológico De Monterrey (Mexico)

Technical University of Munich (Germany)

University of California, Berkeley (USA)

University of California, Irvine (USA)

University of Milano-Bicocca (Italy)

University of Toronto (Canada)

DCC DIGITAL CREDENTIALS CONSORTIUM

Digital Credentials Consortium (DCC)

Vision

Create an education landscape that increases learner agency and promotes more equitable learning and career pathways

Mission

Create a **trusted**, **distributed**, and **shared infrastructure** that is the standard for **issuing**, **storing**, **displaying**, and **verifying** digital credentials

DCC | DIGITAL CREDENTIALS CONSORTIUM

What's a Digital Credential?

- A "digital credential" — a data-based digital representation of a diploma, degree, program certificate, workshop certificate

GT Guide

Issued to: Ian Malcom

Issuer

Example University

The holder of this credential is qualified to lead new student orientations.

Criteria

Demonstrated knowledge of key campus locations, campus services, and student organizations.

Issuance Date

Sep 5, 2021

Name of credential, name of recipient, university
name, date issued, perhaps a description

Guiding Principles | Values

Learners - Commitment to <u>learner agency</u> and participation
- Learners retain primary control over their credentials

Issuers - Commitment to <u>issuer control</u> of the design of the credential
- Issuers control to whom they issue credentials, the particular achievement that the credential represents, and which credential options are available to the learner

Trust - Commitment to <u>open</u> processes, open standards, and software
- <u>Credentials can be verified without consulting original issuer</u>
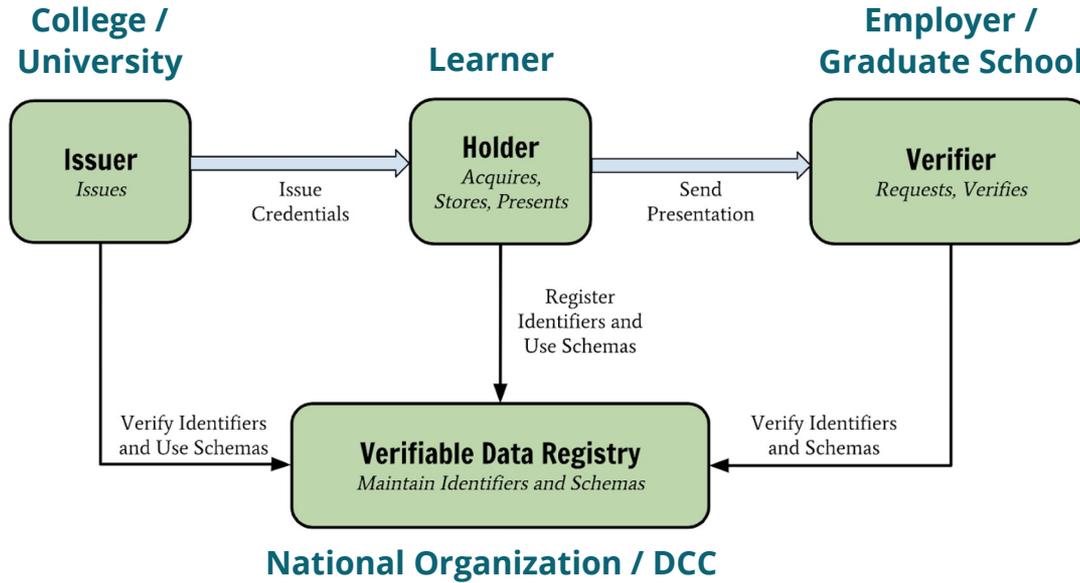
How does DCC do its work?

- Develops open standards, open source reference libraries, core infrastructure services
  - Co-lead W3C Verifiable Credentials for Education (W3C VC-EDU) Task Group
  - Invited expert to IMS Global on Comprehensive Learner Record and Open Badges v3 specifications
  - Connections to international efforts
  - github.com/digitalcredentials
- DCC members build tools and issue credentials
  - Supported through Technical Working Group (DCC TWG)

DCC DIGITAL CREDENTIALS CONSORTIUM
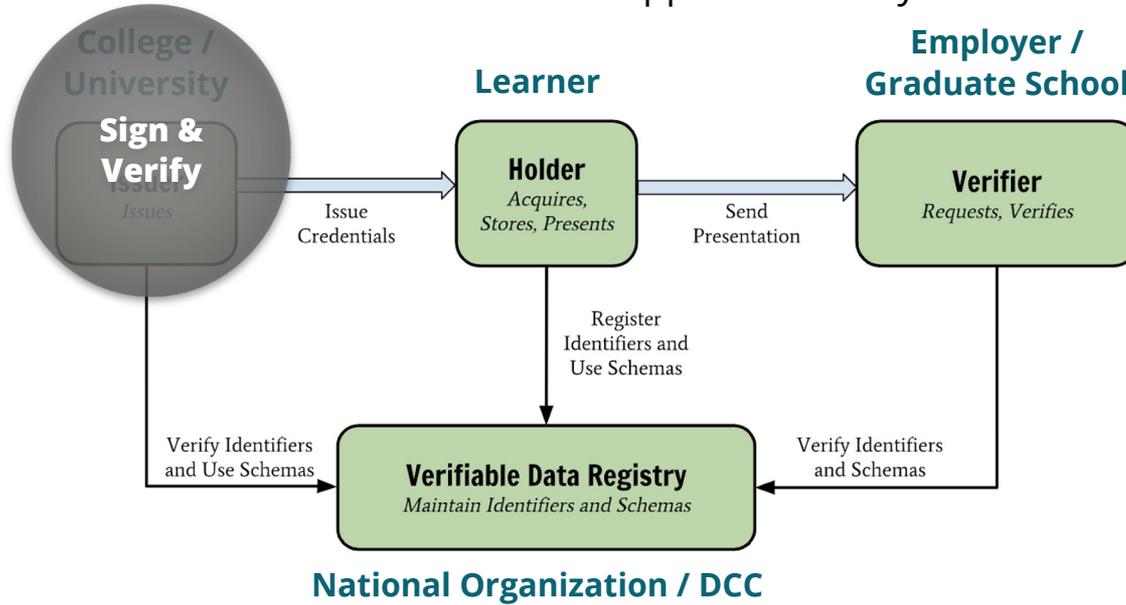
Verifiable Credentials

Verifiable Credentials Ecosystem

W3C Verifiable Credentials Data Model

College / University

Learner

Employer / Graduate School

Issuer
Issues

Issue Credentials

Holder
Acquires, Stores, Presents

Send Presentation

Verifier
Requests, Verifies

Register Identifiers and Use Schemas

Verify Identifiers and Use Schemas

Verify Identifiers and Schemas

Verifiable Data Registry
Maintain Identifiers and Schemas

National Organization / DCC

DCC Credential
Tamper-evident credential where the authorship can be cryptographically verified, that meets the technical and policy specifications adopted by the DCC.

DCC DIGITAL CREDENTIALS CONSORTIUM

Verifiable Credentials Ecosystem

DCC software & tools to support the ecosystem

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Sign & Verify
Issuer
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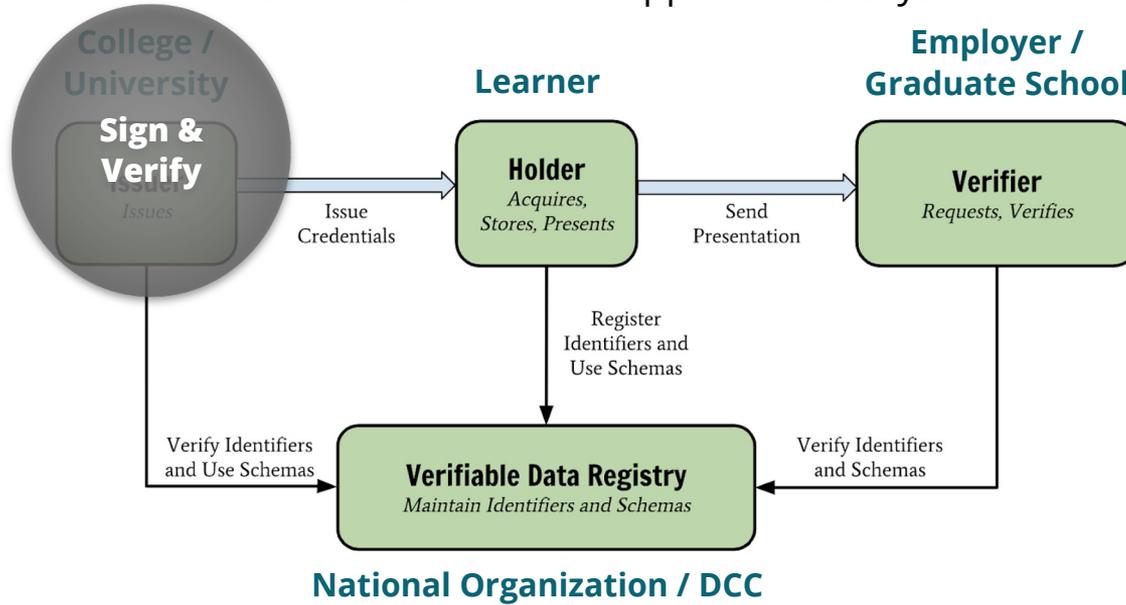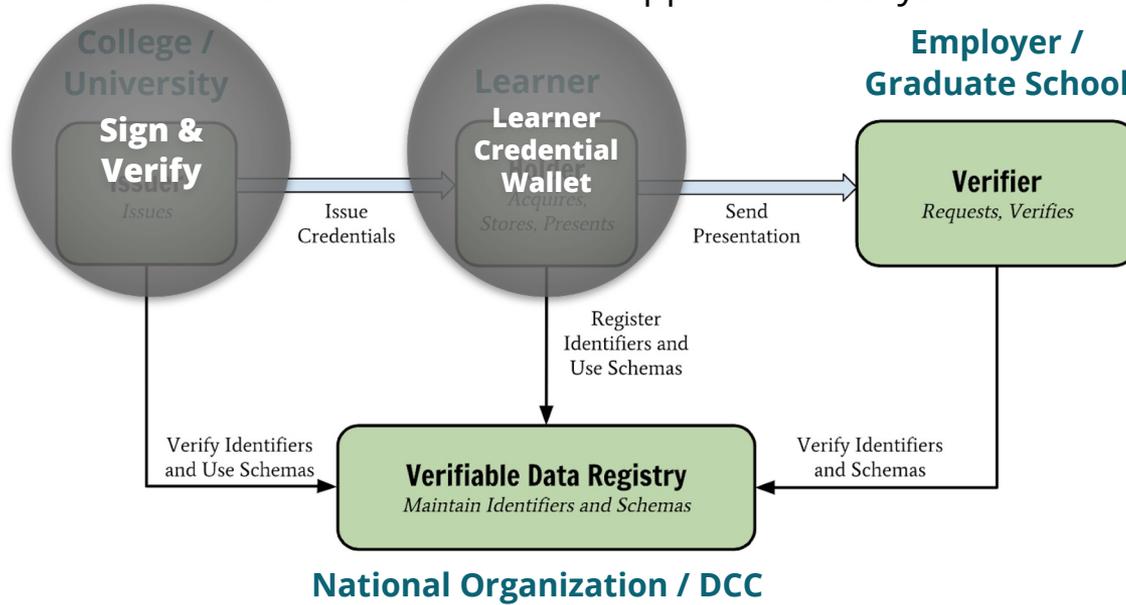
Verifiable Credentials Ecosystem

DCC software & tools to support the ecosystem

College / University

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Issues

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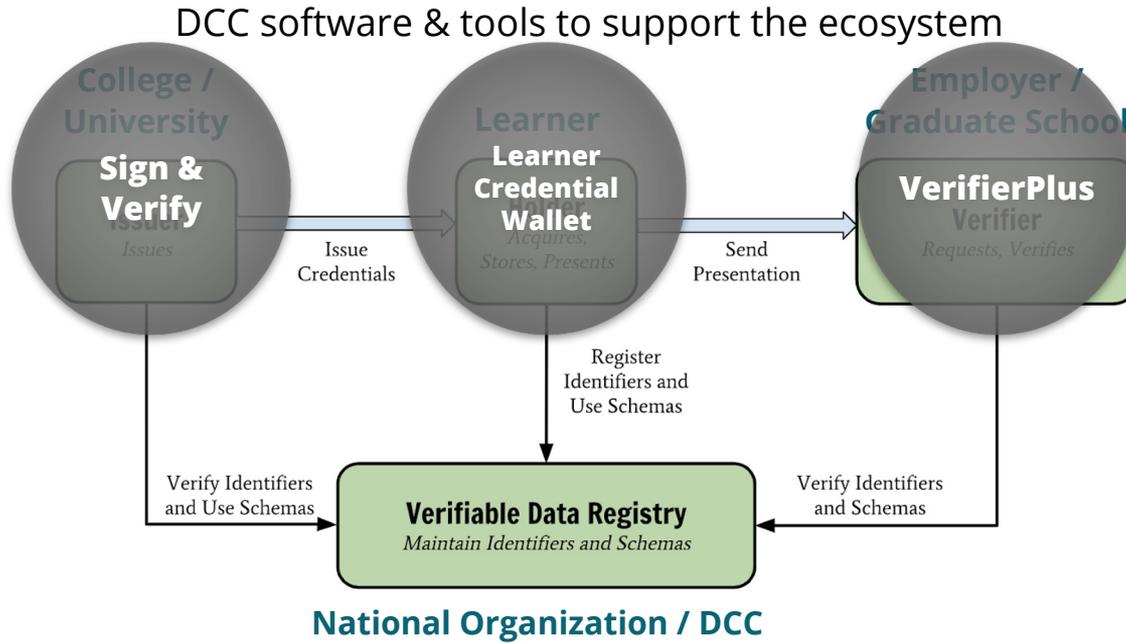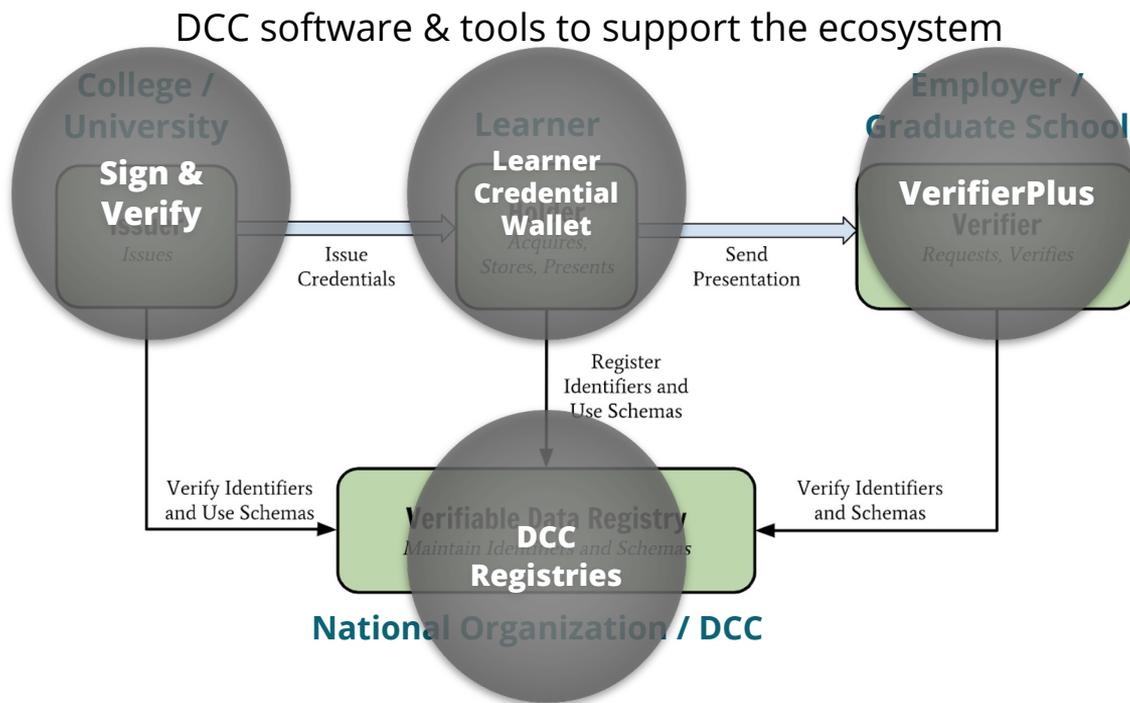
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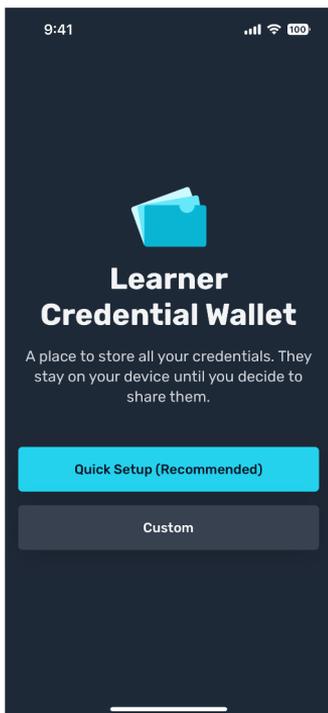
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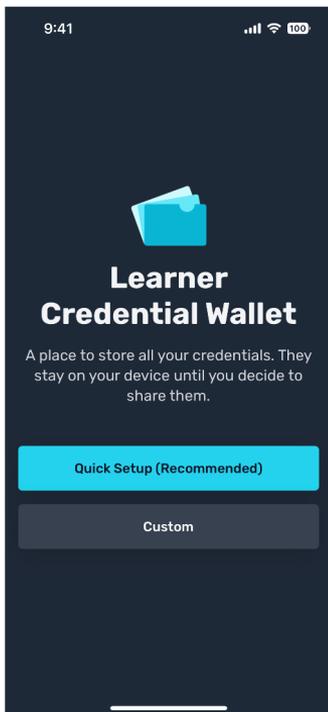
Learner Credential Wallet

- **Key component** of digital credential ecosystem
  - Prioritizes learner agency to control their own credentials and prevents lock-in
  - Establishes a reference implementation
  - Open source, freely available
- Wallet **specification** released (May 2021)
- **Open-source** code hosted on Github (Dec 2021)
- Deployment pilots with U.S. institutions
- Participant in interoperability plugfests (Jun & Nov 2022)

9:41

Learner Credential Wallet

A place to store all your credentials. They stay on your device until you decide to share them.

Quick Setup (Recommended)

Custom

Learner Credential Wallet

- Both **Android** and **iOS** versions
  - Initial features complete
  - Available from [lcw.app](lcw.app)
- Key features
  - Passphrase to secure wallet, biometric support
  - Standards compliant: W3C Verifiable Credentials, Open Badges v3; VC-API
  - Add via QR code, deep link from email, web page or LTI module
  - Authenticate user before issue via OIDC call to institution Identity Provider, bearer token, SAML 2 (in progress)
  - Share credential via file, public web link, shortcut to LinkedIn
  - Multiple user profiles each with distinct identifiers

9:41

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Quick Setup (Recommended)

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DCC DIGITAL CREDENTIALS CONSORTIUM

Learner Credential Wallet

A place to store your learner credentials

Download on the App Store

GET IT ON Google Play

Learner Credential Wallet is an open source mobile wallet developed by the Digital Credentials Consortium, a network of leading international universities designing an open infrastructure for academic credentials.

Learn more about the 2022 Learner Credential Pilot

Frequently Asked Questions

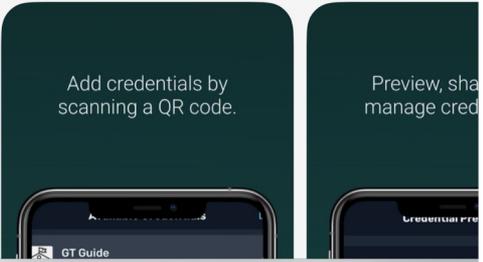# Learner Credential Wallet

Store your learner credentials

TestFlight version 1.15.3 is installed.
View in TestFlight

1 RATING	AGE	CATEGORY	DEV
5.0 ★★★★★	**4+** Years Old	🌐 Education	Massac

What's New

Version History

Version 1.4.1   8mo ago

Add support for more issuers.

Preview

Add credentials by scanning a QR code.

Preview, sha manage cred

GT Guide

Credential Pre

Today	Games	Apps	Arcade	Search

10:19

←   🔍   ⋮

Learner Credential Wallet

MIT

Uninstall	Open

What's new ●   →
Last updated Mar 24, 2022

Add support for more issuers.

Rate this app
Tell others what you think

☆   ☆   ☆   ☆   ☆

Write a review

Developer contact   ⌄
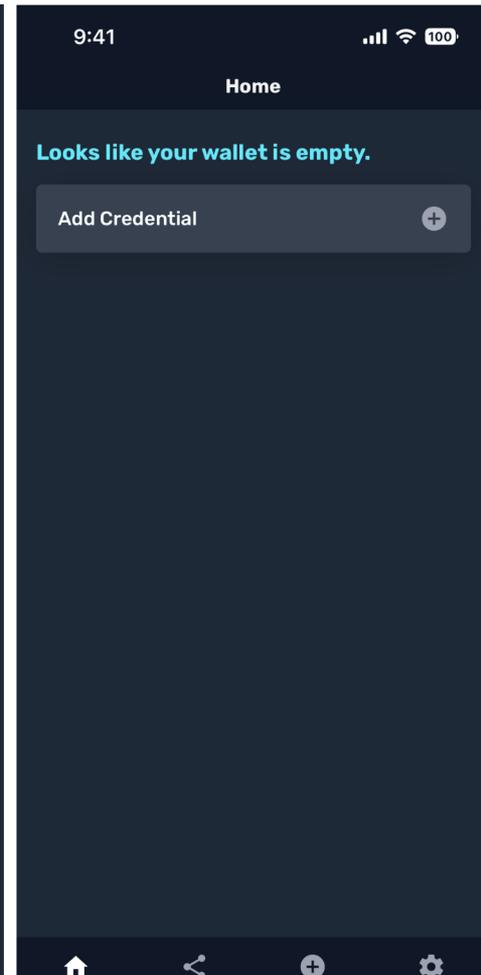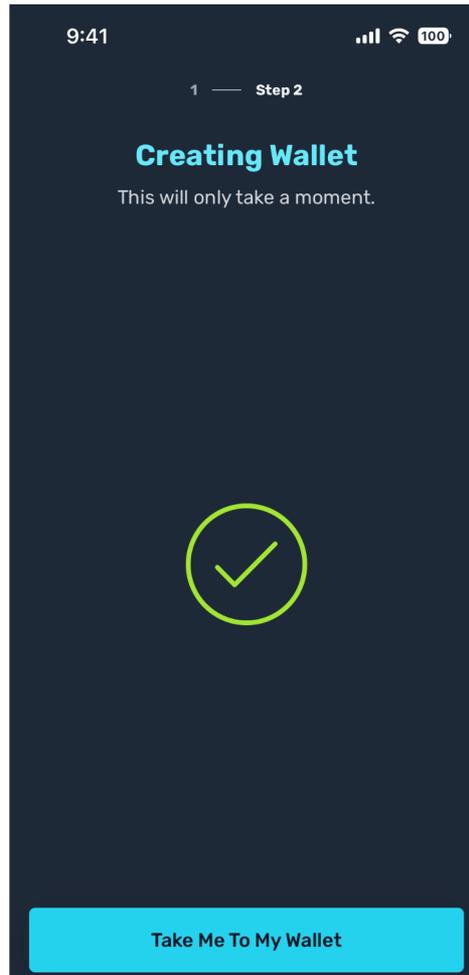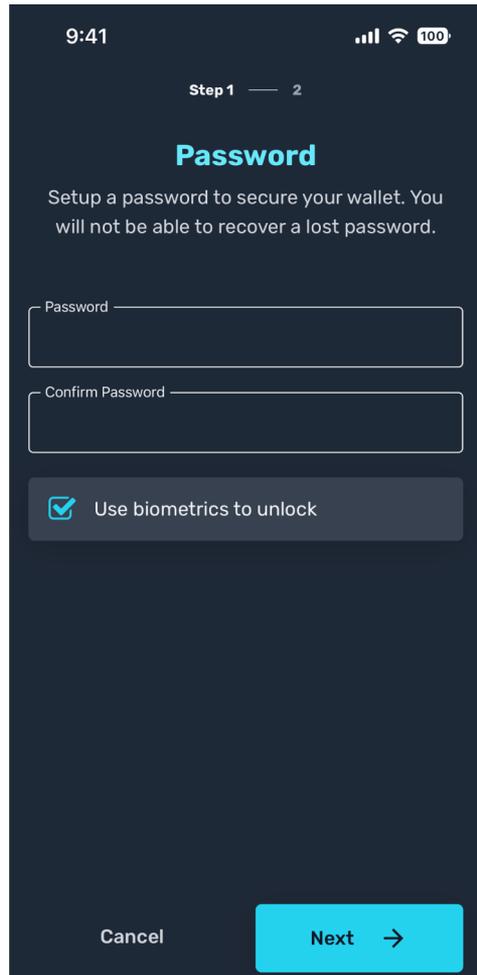
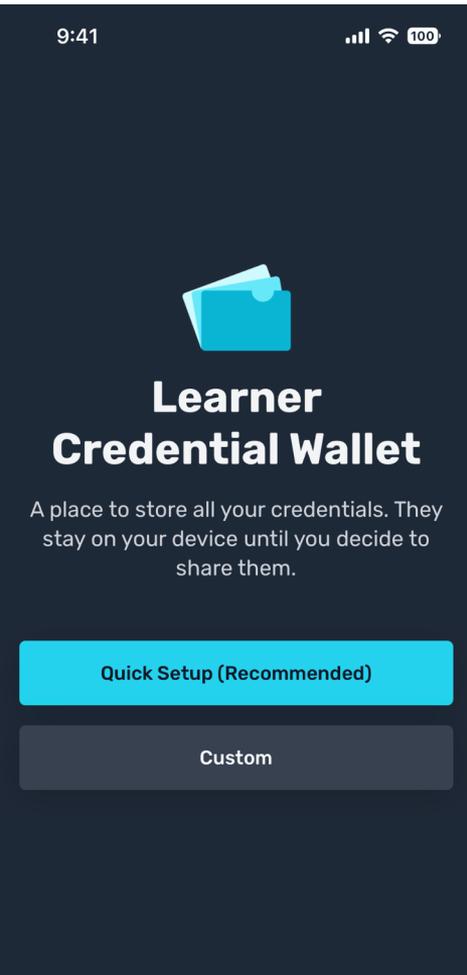**About this app**   →
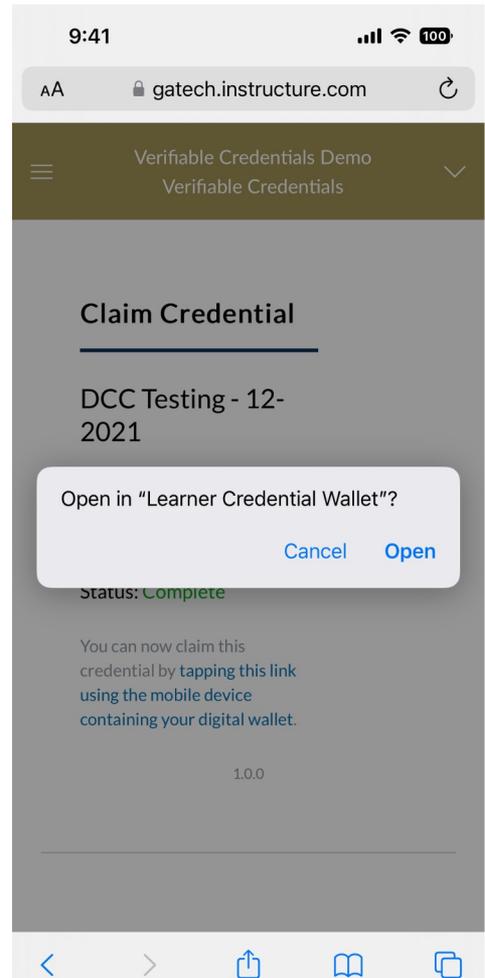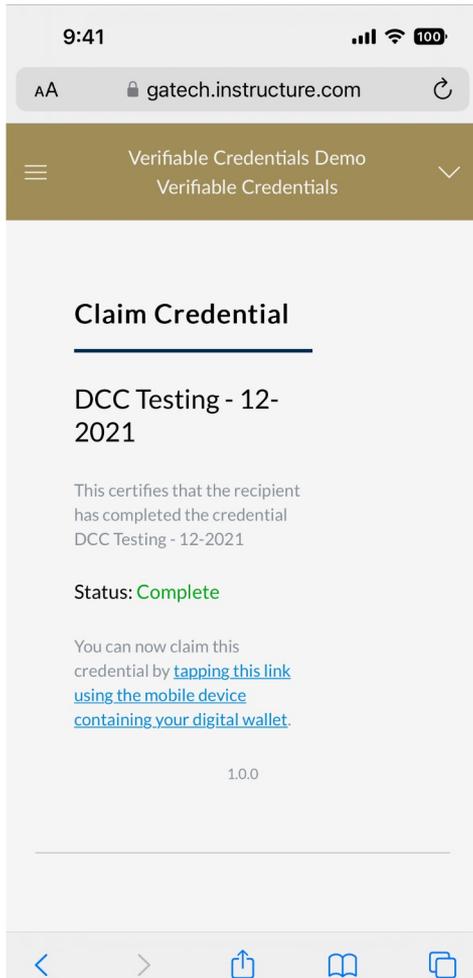
A place to store your digital educational credentials

Education

Live demo of Learner Credential Wallet

Adding a Credential from the Canvas Learning Management System

Learner Credential Wallet

A place to store all your credentials. They stay on your device until you decide to share them.

Quick Setup (Recommended)

Custom

Password

Setup a password to secure your wallet. You will not be able to recover a lost password.

Password

Confirm Password

☑ Use biometrics to unlock

Cancel

Next →

Creating Wallet

This will only take a moment.

✓

Take Me To My Wallet

Home

Looks like your wallet is empty.

Add Credential ⊕

Install and setup Learner Credential Wallet

Screen 1 (left):

9:41

🔒 gatech.instructure.com

Verifiable Credentials Demo
Verifiable Credentials

Verifiable Credentials

You have earned a verifiable credential by completing a set of requirements defined by your teacher. Verifiable credentials are the digital equivalent of physical credentials. In the context of this tool, these digital credentials might be commonly referred to as badges or certificates. To get started:

1. Ensure you have installed a digital wallet for verifiable credentials. We recommend Learner Credential Wallet,

Screen 2 (center):

9:41

🔒 gatech.instructure.com

Verifiable Credentials Demo
Verifiable Credentials

Claim Credential

DCC Testing - 12-2021

This certifies that the recipient has completed the credential DCC Testing - 12-2021

Status: Complete

You can now claim this credential by tapping this link using the mobile device containing your digital wallet.

1.0.0

Screen 3 (right):

9:41

🔒 gatech.instructure.com

Verifiable Credentials Demo
Verifiable Credentials

Claim Credential

DCC Testing - 12-2021

Open in "Learner Credential Wallet"?

Cancel   Open

Status: Complete

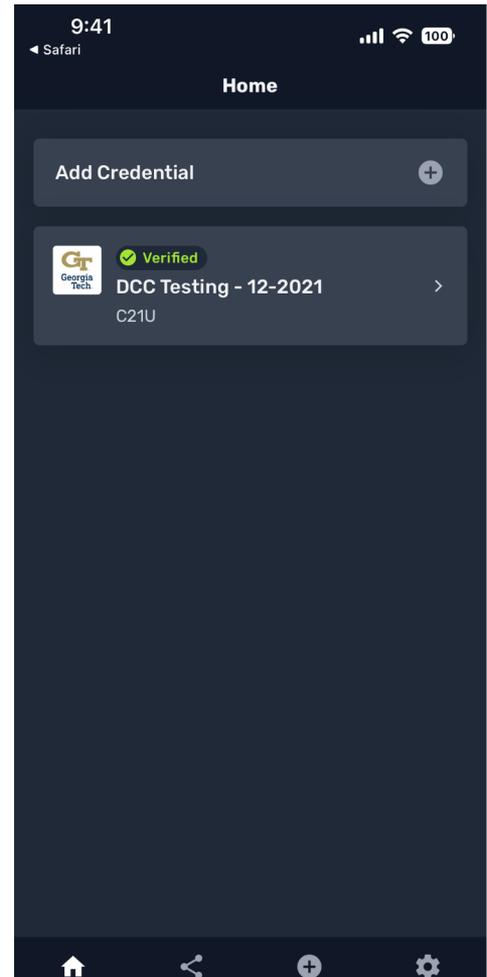You can now claim this credential by tapping this link using the mobile device containing your digital wallet.

1.0.0

Request Credential from Learning Management System

9:41
◀ Safari

9:41
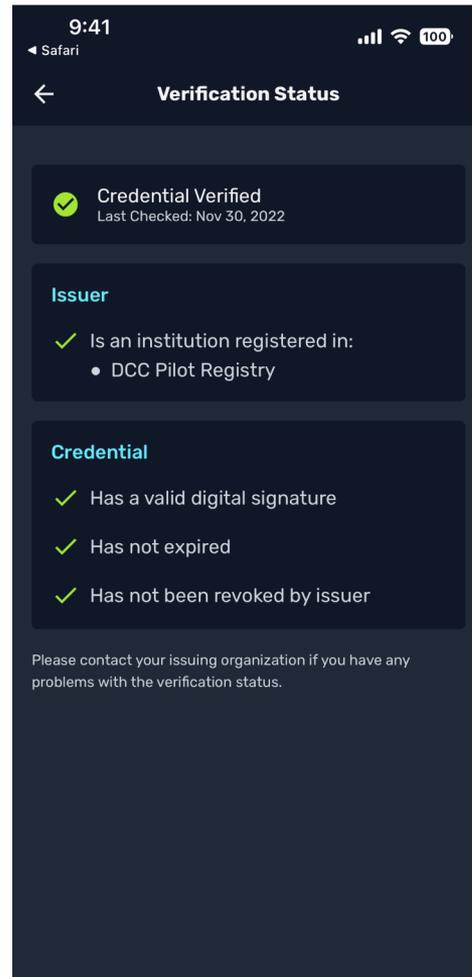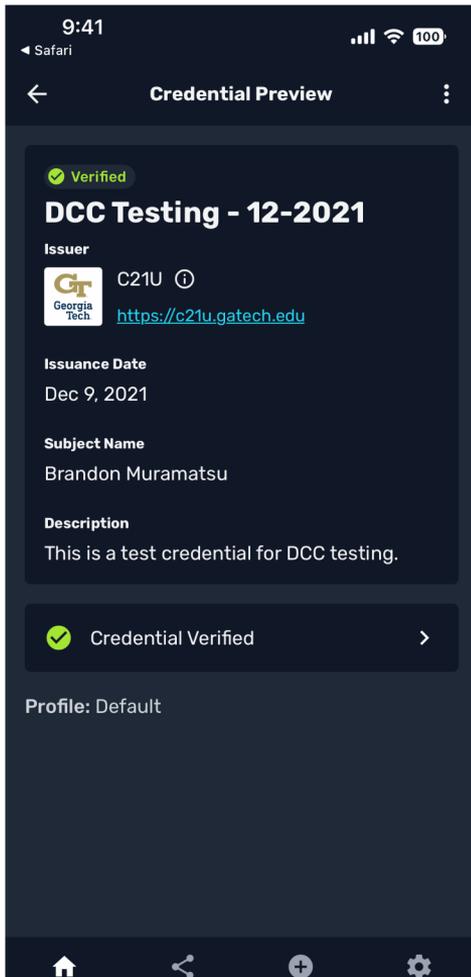◀ Safari

9:41
◀ Safari

9:41
◀ Safari

Choose Profile

Issue the credential(s) to the selected profile.

Default ›

Available Credentials   Done

Storing in Profile: Default

"Learner Credential Wallet"
Wants to Use "gatech.edu" to
Sign In
This allows the app and website to
share information about you.

Cancel   Continue

Accept All

Cancel   🔒 sso.gatech.edu   AA ↻

GT Georgia Tech.   Georgia Tech Login Service

Enter your GT Account and Password

GT Account:

Password:

LOGIN

The GT Web Login Service login page and the
Duo Mobile app have recently changed. Please
refer to these pages for a review of the changes:
GT Web Login Service Appearance Update and
Duo Mobile 4.0 app update.

ATTENTION: When you are finished using all of
your authenticated applications, please log out of
this system and exit your browser to ensure you
do not leave any of your applications (such as
your e-mail) open to other users of this machine.

TERMS OF USE

‹   ›   ⬆

Available Credentials   Done
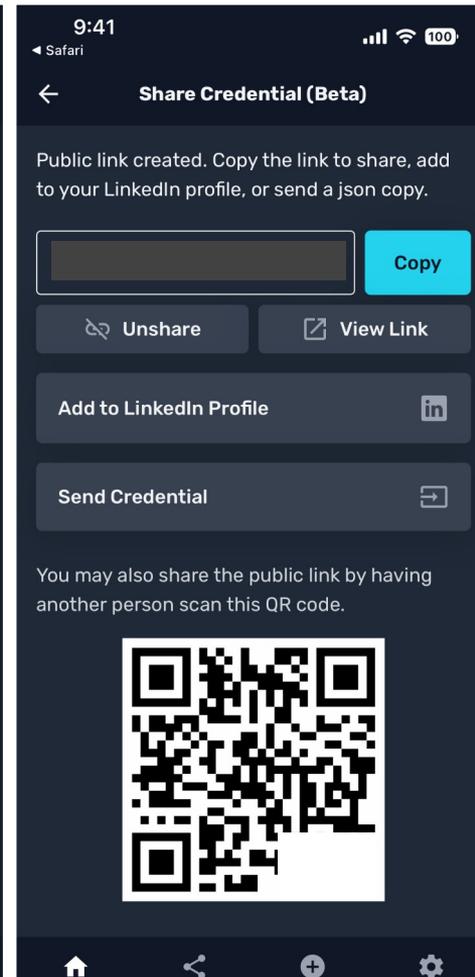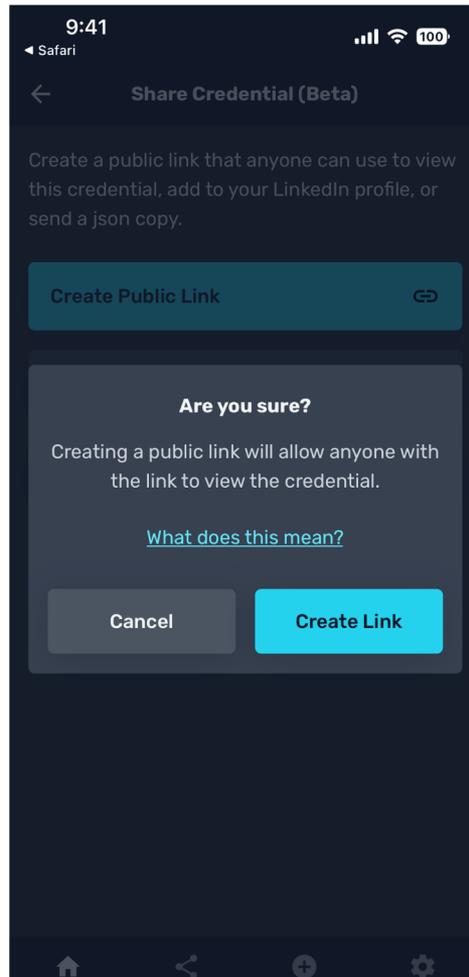
Storing in Profile: Default

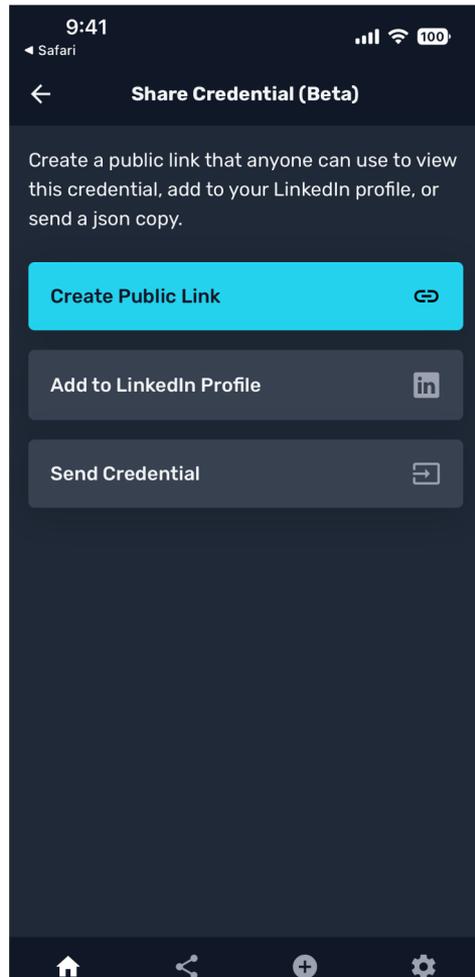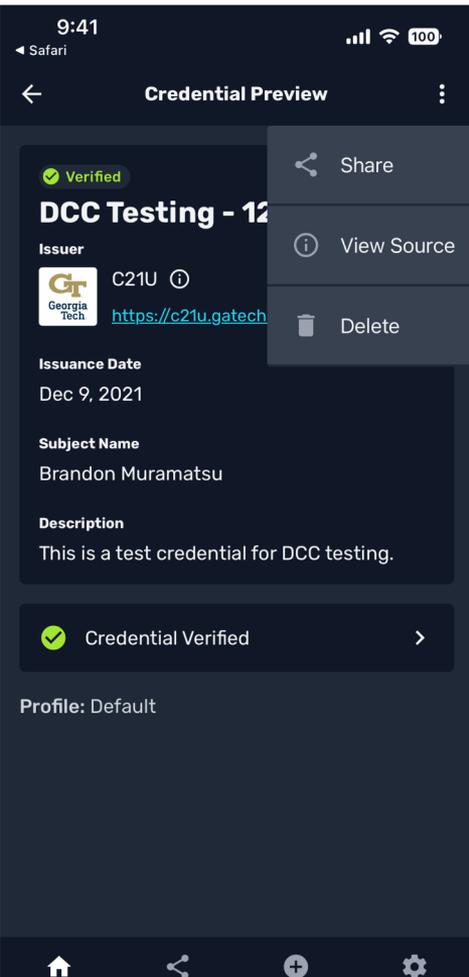**Handling Credential Request**
● ● ●

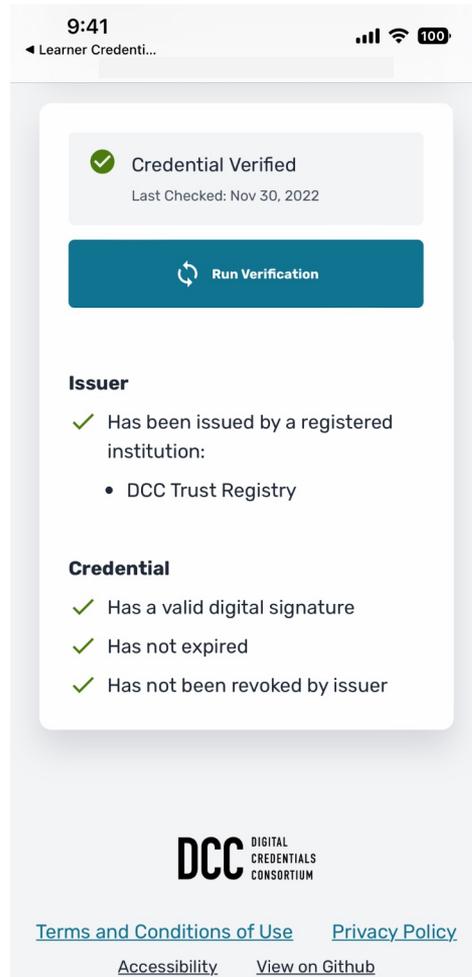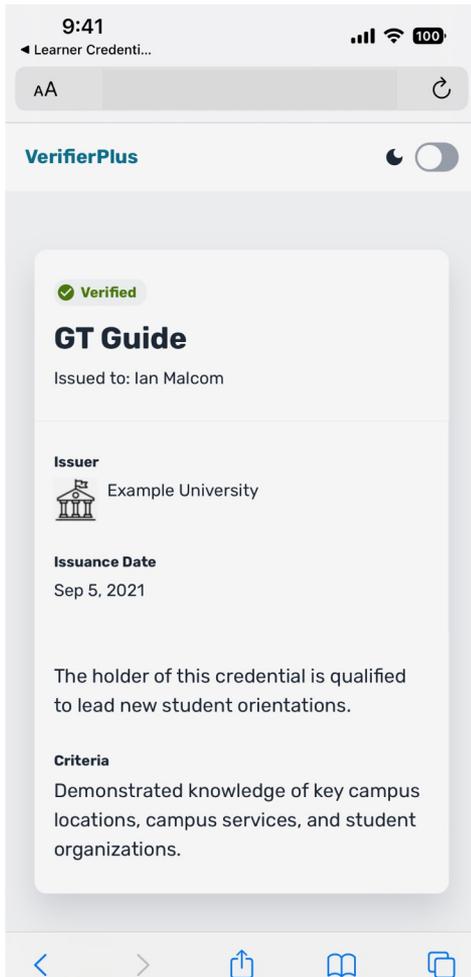Accept All

Select a Profile, Authenticate to Receive Credential

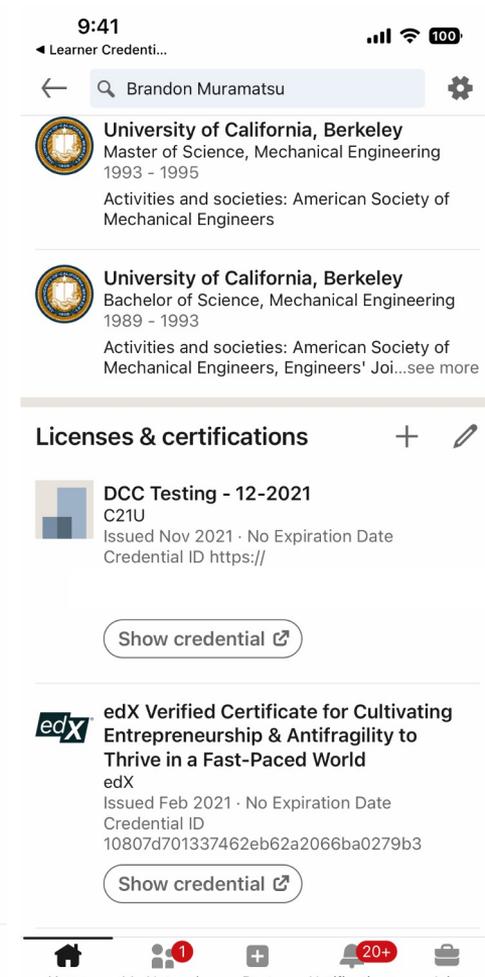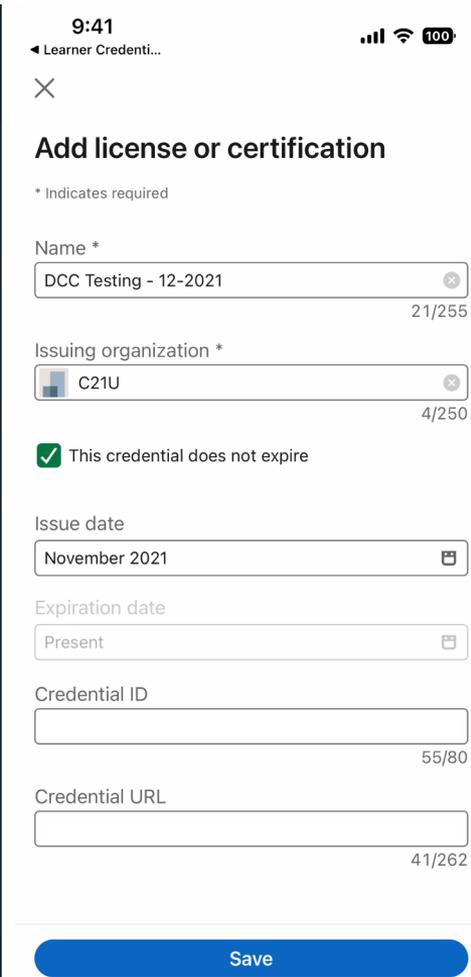Accept Credential, Add to Wallet, View on Wallet Home Screen

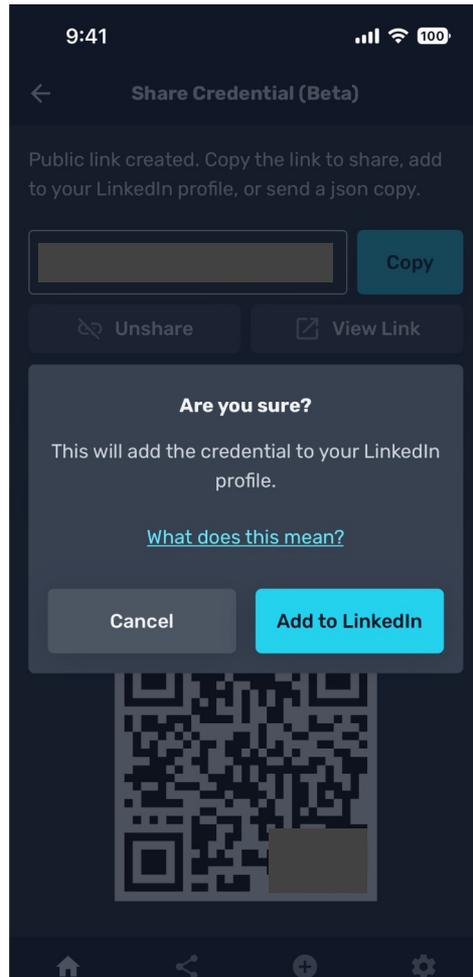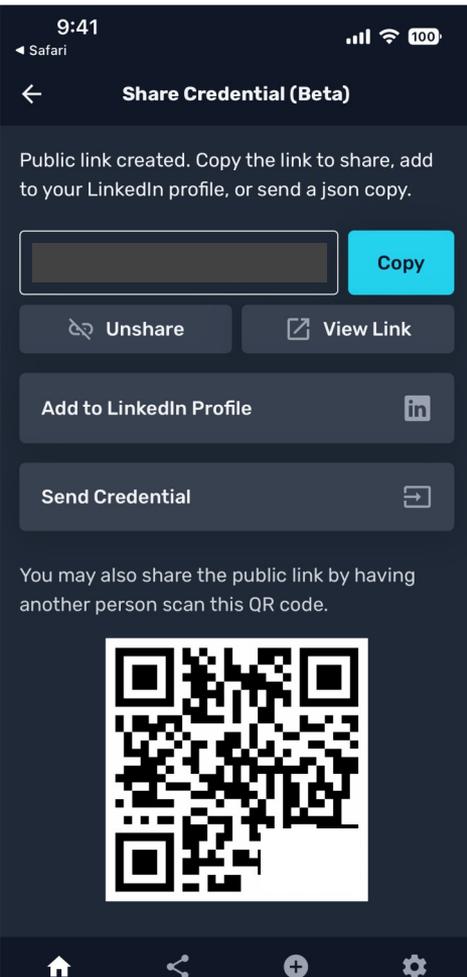Credential Preview, Verification Status

Share Credential, Create Public Link

View Shared Public Credential, Verification

Share Credential (Beta)

Public link created. Copy the link to share, add to your LinkedIn profile, or send a json copy.

Copy

🔗 Unshare | ⬆️ View Link

Add to LinkedIn Profile 🔗

Send Credential ➡️

You may also share the public link by having another person scan this QR code.

Share Credential (Beta)

Public link created. Copy the link to share, add to your LinkedIn profile, or send a json copy.

Copy

🔗 Unshare | ⬆️ View Link

Are you sure?

This will add the credential to your LinkedIn profile.

What does this mean?

Cancel | **Add to LinkedIn**

✕

Add license or certification

* Indicates required

Name *

DCC Testing - 12-2021

21/255

Issuing organization *

C21U

4/250

☑ This credential does not expire

Issue date

November 2021

Expiration date

Present

Credential ID

55/80

Credential URL

41/262

Save

← Brandon Muramatsu ⚙️

University of California, Berkeley
Master of Science, Mechanical Engineering
1993 - 1995

Activities and societies: American Society of Mechanical Engineers

University of California, Berkeley
Bachelor of Science, Mechanical Engineering
1989 - 1993

Activities and societies: American Society of Mechanical Engineers, Engineers' Joi...see more

Licenses & certifications ＋ ✏️

DCC Testing - 12-2021
C21U
Issued Nov 2021 · No Expiration Date
Credential ID https://

Show credential 🔗

edX Verified Certificate for Cultivating Entrepreneurship & Antifragility to Thrive in a Fast-Paced World
edX
Issued Feb 2021 · No Expiration Date
Credential ID
10807d701337462eb62a2066ba0279b3

Show credential 🔗

Add to LinkedIn Profile

Questions?

Brandon Muramatsu, mura@mit.edu