

Recap and Project Discussion

COMP 388-002/488-002 Biometrics

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Fall 2025



LOYOLA
UNIVERSITY CHICAGO

Today's Attendance

Please fill out the form

forms.gle/9KX2bXER9K6TdoJ58



Recap, midterm exam

Biometrics

What is Biometrics (biometric recognition)?

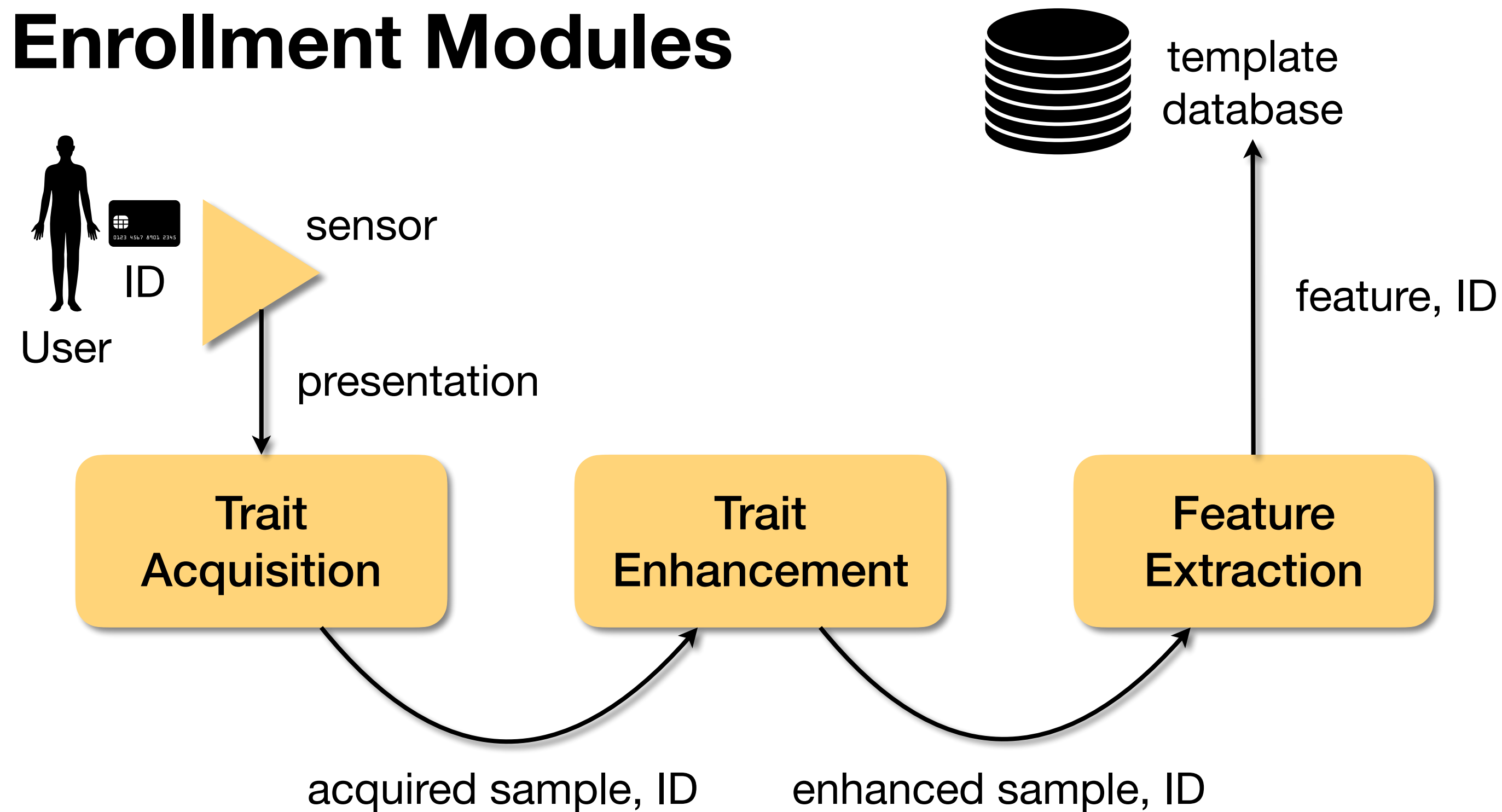
What are the types of biometric recognition?

What is a biometric system?

What are the typical modules of a biometric system?

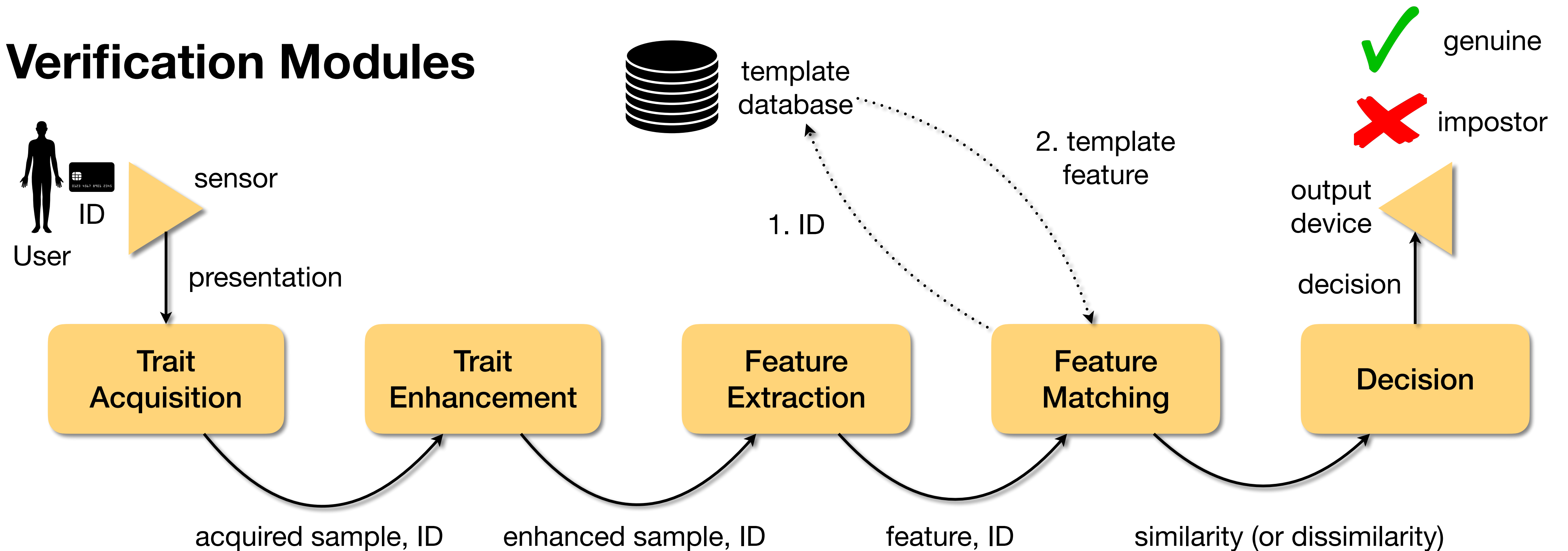
Biometric Systems

Enrollment Modules



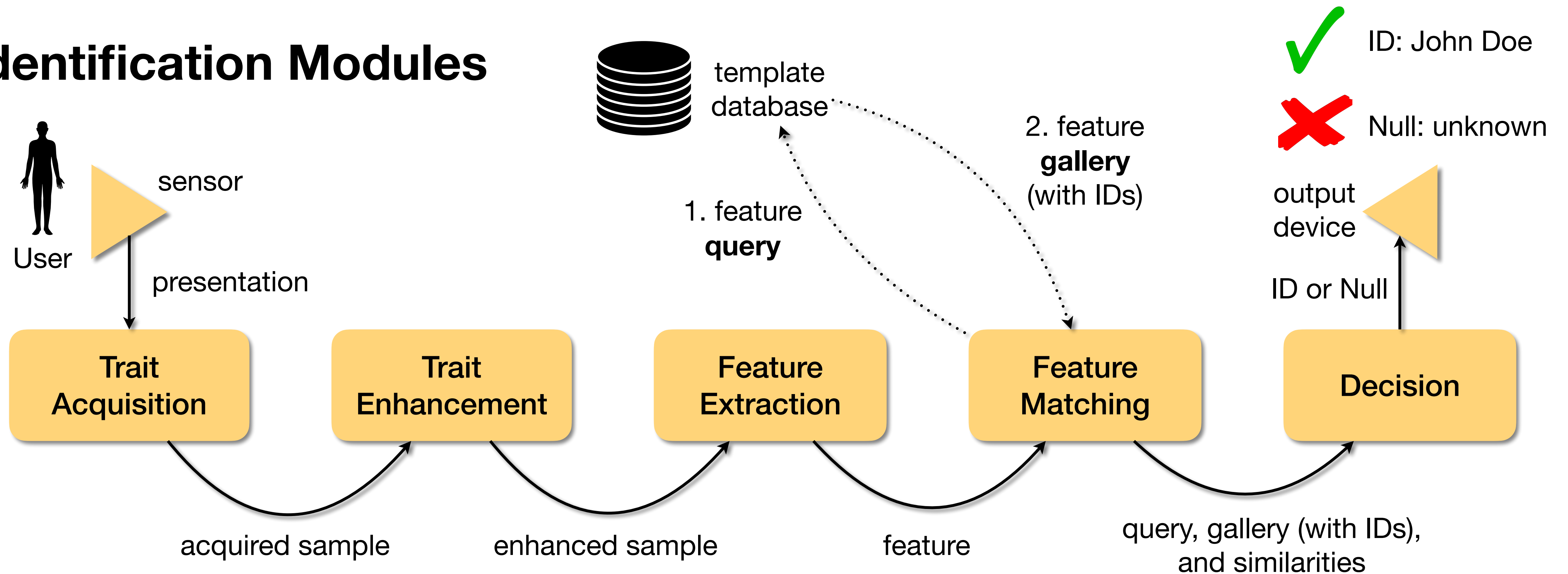
Biometric Systems

Verification Modules



Biometric Systems

Identification Modules



Recap, midterm exam

Biometric Identification

What is open set recognition?

Why do we need open set recognition in Biometrics?

How does one distinguish between an open set and a closed set system?

How can one make a recognition system an open set?

Recap, midterm exam

Utility

Why do we use Biometrics?

What are the pros and cons of using Biometrics?

Why do we use computers in Biometrics?

Traits

What is a biometric trait?

What is not a biometric trait?

What should one consider when choosing traits?

Recap, midterm exam

Ethical aspects

Misuse, abuse, and bias

Function creep

Covert deployment

Errors and attacks

Denial of access, intrusion, and repudiation

Impersonation, obfuscation, spoofing, hill climbing, and master keys

Closed-set versus open-set

Recap, midterm exam

Metrics

How do we compare two or more systems?

d-prime and AUC

Genuine versus impostor pairs

Similarity versus distance-based scores

Recap, midterm exam

Fingerprints

Epigenetic traits

Ridges and valleys

Level-1, level-2 and level-3 features

Examples and utility

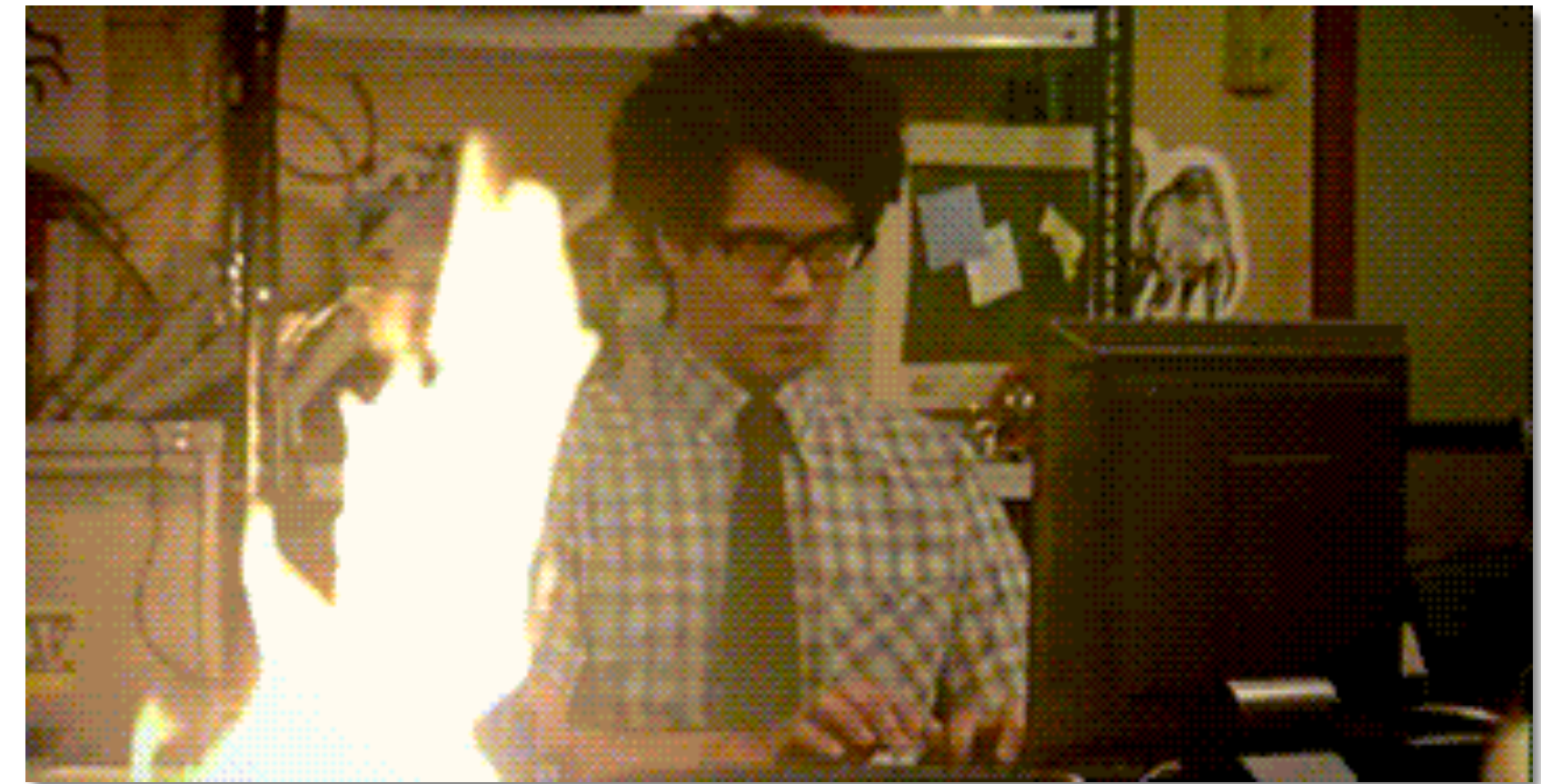
Types of sensors

*Capacitive, optical, pressure,
thermal, ultrasound, and touchless*

Assignment 2

Fingerprint recognition

Open today and due in 17 days



What's Next?

Midterm exam

In class on Wednesday

On paper

One-page cheat sheet is allowed

