

# CS660 Fall 2024

## Lab 1: Introduction & PA1

BOSTON  
UNIVERSITY



# General Logistics

- What is covered in labs?
- Lab timings
  1. Friday 12:20 – 1:10 PM
  2. Friday 1:25 – 2:15 PM
  3. Friday 4:40 – 5:30 PM

please attend the assigned lab session unless you have a temporary schedule conflict. If you need to substitute (subject to space restrictions) with a different lab session, **notify all TFs in advance**.

- Lab expectations

# Programming Assignments

- Let's implement a database system!
- Incrementally build over the semester
- **Graded not only for the code!**
  1. Code (should pass all tests)
  2. Answer technical questions
  3. Probable demo (**\*only for some PAs**)
  4. Documentation

# SimpleDB

- Just as the name suggests, a simple prototype
- Contains only the engine (or simply, the backend of a database)
  - Cannot directly write SQL queries to test things
  - Rather, we build the query using multiple operators and pass it to the engine to
- Earlier done in Java, now in C++
- Unit tests to ensure the correctness of functionality.

# PAO

- Bufferpool – a fundamental unit behind any major component in database systems
- Holds (and manages) a subset of pages in memory
- Will replace pages when required – can follow multiple policies, as defined by the system