

**CS 327 Spring 2025**  
**Homework 1**  
**Basic Concepts/ DBMS Architecture**

**Due on Moodle before class on Friday, January 31. Submit a single PDF file.**

**Question 1:**

- a. List any three advantages of using a database over traditional file storage. [3]
- b. List any three situations where using a database would be disadvantageous. [3]

**Question 2:**

- a. Describe in your own words, what is meant by data abstraction. [2]
- b. Write in your own words, the difference between database schema and database instance. [2]

**Question 3: Write brief answers to the following, in your own words:**

- a. When starting up your servers, which should you start first: the Apache web server or the MariaDB database server? Why? [3]
- b. What does A\_I mean, in the context of a table column? What is it used for? [2]

**Question 4:** Create a database called “college”. In it, create a table called “student.” It should have a numeric ID column that is the primary key, a firstname, a lastname (both 30 characters long), a decimal GPA column, an email column and a phone number column. Only the phone number column is allowed to be null, and the email must be unique.

View the SQL code for the table creation and copy-paste it as the answer to this question. [5]