# User\_Data Schema

Functional Dependencies:

* user\_id → email, password\_hash, first\_name, last\_name, year\_level, bio, created\_at, college\_id (FK), major\_id (FK)
* college\_id → college\_name
* major\_id → major\_name
* course\_id → course\_code, course\_name, college\_id (FK)

Highest Normal Form: BCNF

* It is in 1NF, since all attributes are atomic. For example, no attribute in the “user” entity (ie, all attributes implied by user\_id) can be broken down into meaningful smaller parts. This applies to all other relations in the schema.
* It is in 2NF since it is in 1NF, and there are no partial dependencies, since every key is a single key, not a composite one, and every attribute is directly determined by said key. We can see in the ER diagram, and data dictionary that the primary keys are as follows: user\_id, college\_id, major\_id, and course\_id, which are all singular keys.
* It is in 3NF since it is in 2NF, and the left-hand side of every FD is a superkey.
* It is in BCNF, since it is in 3NF, and the left-hand side of every FD is a superkey.