

# Table Structure

All the tables and attributes required for marking attendance

Table Name	Attributes
users	user_id, first_name, last_name, account_type, email_id, password
teachers	teacher_id, teacher_code
students	student_id, year, semester, branch
batch_info	batch_id, batch_code, year, semester
batch_record	batch_id, serial_no, student_id
subject_info	subject_id, subject_code, subject_name
class_info	class_id, batch_id, subject_id, teacher_id, class_type
class_record	class_id, student_id
atd_info	atd_id, class_id, count, log_date
atd_log	atd_id, student_id, status

## Normalisation

### 1. users

- Actual
  - **user\_id**
  - first\_name (not FFD on primary key only on **user\_id**)
  - last\_name (not FFD on primary key only on **user\_id**)
  - **account\_type**
  - email\_id (not FFD on primary key only on **user\_id**)
  - password (FFD on primary key)
  
- 1NF (1) + 2NF + 3NF
  - user\_id
  - account\_type
  - password
  
- 1NF (2) + 2NF + 3NF
  - user\_id
  - first\_name
  - last\_name
  - email\_id

## 2. student\_info

- Actual + 1NF + 2NF
  - student\_id
  - year (determined by **student\_id**)
  - semester (determined by **year** and thus **student\_id**)
  - branch
- 3NF (1)
  - student\_id
  - branch
- 3NF (2)
  - year
  - semester

## 2. batch\_info

- Actual + 1NF + 2NF
  - batch\_id
  - batch\_code
  - year (determined by **batch\_id**)
  - semester (determined by **year** and thus **batch\_id**)
- 3NF (1)
  - batch\_id
  - batch\_code
- 3NF (2)
  - year
  - semester

**NOTE** – All other tables are already in their 3<sup>rd</sup> normalised forms.