Guest account: just gets info and can see all the info available

Normal user: can choose their favourite buses and track the info they want more easily (through a personal panel “my buses”), remember if the user is a student based on preferences

Staff user: is allowed to change the information of the buses and create new timetables and routes, as well as change the price of tickets

email, passwords, name, area of residence, status (normal, student)

line, destination, source, stops, time for each stop

DB for bus:

busID, lineID, to, from, departure

See file for eer module “stolen” from a blog of a full-stack developer

Enterprise Model:

A clerk in head office (or operational manager) sets the routes and times they want for the bus lines.

Drivers are assigned to the routes, reducing the total time of the route to their contracted hours: the closest it gets to 0 the better (hours left to allocate)

Customers look at the timetable for the line, without knowing who the driver is, and choose the bus they want to take.

They board the bus, pay the driver, or show them a previously bought and still valid ticket, and take a seat.

Clerk

(Sets routes and rotas)

Driver

Bus

(Route)

Customer

Business goals:

The goal of the business is to provide customers with reliable, fast and relevant public transportation services, all whilst making the running costs (infrastructures, staff, etc) as low as possible to make as much profit as possible.

In order to make the service fast and relevant, the company tracks what stops seem to be the most used by customers, either through driver feedback or through the use of the website, and sees what sections and portions of the main lines are used the most at certain times of the day, adapting the routes and services available at certain times of the day according to the user needs (examples of adaptation would be school holidays vs. term timetables, as well as not running the whole line at certain times of the day)

To make sure that the service is reliable, it constantly verifies if the rotas are properly allocated (no drivers assigned to two different routes at the same time) and checks against current traffic etc the time that it takes to go through the stops (e.g. changes the time it takes to get from stop A to stop B at peak times).

To avoid costs, the company makes sure that all the drivers have their hours allocated properly (not making less or more hours), as well as some systems that are used to make the service fast and reliable.

To provide a better service to their customers, the company now wants to provide the customers with an online service where they can see the updated timetables for their favourite services at all times, provide staff with a service that makes it easier for them to update bus timetables and make rotas, where all the information is centralized and where the computer systems make the tedious work of checking rotas and timetables against each other for consistencies easier.