

Database Design Writeup

I chose to implement this design with the help of 2 tables: Users and Reservations.

Users stores information about the users in Azure. The username is primary key (since we cant have 2 users with the same username). This table also stores password (no hashing) and the balance of the user. The balance of the user is implemented by a check constraint (>-1) so a user with negative balance cannot be created.

Reservations stores information about the itineraries user has booked. This table has a primary key of ID, giving each reservation under the table a unique ID that can be looked at. I also stored 2 flights, with flight one being a reference to flights table.

I decided not to have fid2 as a foreign key as I am setting fid_2 to -1 when there is no second flight. This would violate foreign key constraint. However, the data and table is still very safe since the only way fid_2 is inserted into reservations is from search, which pulls data directly from flights table. Hence, there is no chance of a fid_2 error. (ie fid_2 not being in the flights table)

Reservations also stores day_of_month (to check if 2 booking on same day) , paid, canceled attributes for the ease of checking and updating them while running queries. Username was also made a foreign key to users as users not in the system should not be able to book.