Documentation

The database was designed to hold and preserve all the relationships in our ER model. It has three main functions.

1) Customer information services
    a. Add, edit, or view customer information
2) Trip information and Reservation
    a. Complete single route and combination route trip searches with various sorting options
    b. Book a reservation for a specified route on a given day
3) Advanced searches
    a. Find specific trains and routes that match specified criteria

Below are the proper functions to call for each respective required operation

1.1.1 *Add_customer*(fnam **varchar**(15),lnam **varchar**(15), stree **varchar**(30),tow varchar(30), postal **varchar**(15))

1.2.1 *single_route_trip_search*(arrival **integer**, destination **integer**, weekday **varchar** (10))

1.2.2 *combination_route_trip_search*(arrival **integer**, destination **integer**, weekday **varchar** (10))

1.2.4.1 *single_route_trip_stops*(arrival **integer**, destination **integer**, weekday **varchar** (10))

1.2.4.2 *single_route_trip_stations*(arrival **integer**, destination **integer**, weekday **varchar** (10))

1.2.4.3 & 1.2.4.4 *single_route_trip_price*(arrival **integer**, destination **integer**, weekday **varchar** (10))

1.2.4.5 & 1.2.4.6 single_route_trip_time(arrival **integer**, destination **integer**, weekday **varchar** (10))

1.2.4.7 & 1.2.4.8 *single_route_trip_dist*(arrival **integer**, destination **integer**, weekday **varchar** (10))

1.2.5 just add to booking table and triggers will do the rest

1.3.1 *find_trains*(stationid **integer**,dayid **char**(10),**hour time**)

1.3.2 *find_multi_line*()

1.3.3 *find_similar_route*(routeID integer)

1.3.4 *stations_all_trains*()

1.3.5 *search_no_stop*(station_num **integer**)

1.3.6 *search_XX_stop*(xx **double precision**)

1.3.7 *display_route_schedule*(route_num **integer**)

1.3.8 *route_availability*(route_num **integer,** weekday **varchar** (10), hour **time**)

The application will prompt the user for needed input to perform each operation. There were various difficulties implementing the database. Deciding to create a “routeinfo” to keep track of station orders along a specific route was a choice that was made during implementation. Alternatively, we could have used an array data type to save stations distance and stops on route in order to maintain order. The Database does not deal with other various difficulties. It does not account for specific dates and holidays where a train schedule might vary. It only works for booking trains one week at a time. We could improve the database by making it account for more of these complexities. Additionally we could improve the interface in which the interface can be accessed.