Data Modelling Documentation

Link to schema: https://app.quickdatabasediagrams.com/#/d/fWEwXP
DB schema diagram for Moby Bikes - MySQL

Rental

Field	Description	Type	Default	Other
Date		datetime		PK, FK
BikeID	Unique bike ID used for rent bike	int		PK, FK
BatteryStart	Battery status when rental started	double		NULLABLE
BatteryEnd	Battery status when rental finished	double		NULLABLE
Duration	Rental Duration = LastGPSTime - LastRentalStart	double		

Coordinates

Rentals coordinates

Field	Description	Type	Default	Other
Date		datetime		PK
BikeID	Unique bike ID used for rent bike	int		PK
Latitude	Bike coordinates if bike is locked out of station	decimal(11,7)		NULLABLE
Longitude	Bike coordinates if bike is locked out of station	decimal(11,7)		NULLABLE

Weather

Field	Description	Type	Default	Other
Date		datetime		
TimeOfDay	Morning (from 7am to noon) Afternoon (from midday to 6pm) Evening (from 6pm to 10pm) Night (from 10pm to 5am)	ENUM(Morning		
Temperature	in Celsius	double		
WindSpeed	in Knots (kt)	double		
Humidity	Relative humidity (%)	int		
Rain	in millimetres (mm)	double		
RainLevel	no rain = 0 drizzle - 0.1~0.3 light rain - 0.3~0.5 moderate rain - 0.5~4 heavy rain - >4	ENUM(no rain,drizzle,light rain,moderate rain,heavy rain)		

Day_Info

Date and time features

Field	Description	Type	Default	Other
Date		DATE		
DayofWeek	Monday = 0 ~ Sunday = 6	ENUM(0,1,2,3,		
Holiday	Irish National Bank Holidays	boolean		
WorkingDay	Monday to Friday AND not Bank Holiday	boolean		
Season	Spring | Summer | Autumn | Winter	ENUM(Spring,Summer,Autumn,Winter)		

tmpRentals

Table with all rentals before preprocess

Field	Description	Type	Default	Other
LastRentalStart	Last time bike was rented	datetime		PK
BikeID	Use for rent bike	int		PK
Battery	Bike max distance in km	double		NULLABLE
LastGPSTime	Last time bike connected with GPS	datetime		
Latitude	Bike coordinates if bike is locked out of station	decimal(11,7)		NULLABLE
Longitude	Bike coordinates if bike is locked out of station	decimal(11,7)		NULLABLE