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/* Generated Code (IMPORT) */
/* Source File: citibike-tripdata.xlsx */
/* Source Path: /home/u60801448/my_shared_file_links/u50396654 */
/* Code generated on: 4/26/22, 6:38 PM */

/********** Student PNumber P2670683 ******************/
%web_drop_table(WORK.IMPORT);


FILENAME REFFILE '/home/u60801448/my_shared_file_links/u50396654/citibike-tripdata.xlsx';

PROC IMPORT DATAFILE=REFFILE
    DBMS=XLSX
    OUT=WORK.IMPORT;
    GETNAMES=YES;
RUN;

PROC CONTENTS DATA=WORK.IMPORT; RUN;


%web_open_table(WORK.IMPORT);

/*2)b)i)  Using sql procedure to remove incorrectly inputted data*/
/*select code and run to display*/
proc sql;
select *
   from WORK.IMPORT
      where not missing (end_station_name,end_station_id);
      QUIT;

/*2)b)ii)  Reformating date and time*/
/*select code and run to display*/
data splitted;
set WORK.IMPORT;
    /*splits start_at into date and time*/
  started_at_date = datepart(started_at);
  started_at_time = timepart(started_at);
  /*splits end_at into date and time*/
  ended_at_date = datepart(ended_at);
  ended_at_time = timepart(ended_at);
  /*date format*/
  format started_at_date date9.;
  format ended_at_date date9.;
  /*time format*/
 format started_at_time time8.;
 format ended_at_time time8.;
RUN;

/*3)a)i) total number of bikes collected/undocked*/
/*select code and run to display*/
proc sql;
create view bikesCollected as
         select Count(started_at) AS no_of_bikes_collected, start_station_name
            from WORK.IMPORT
            group by start_station_name;
            QUIT;

/*3)b) total number of bikes returned*/
/*select code and run to display*/
proc sql;
create view bikesReturned as
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          select Count(ended_at) AS no_of_bikes_returned, end_station_name
             from WORK.IMPORT
             where not missing (end_station_name,end_station_id)
             group by end_station_name;
             QUIT;

/*3)c) Type of customer mostly using citebike*/
/*select code and run to display*/
proc sql;
create table memberTable As
    select Count(member_casual) AS no_of_member_customers, member_casual
     from WORK.IMPORT
      where member_casual = "member"
      group by member_casual;
        quit;

proc sql;
create table casualTable As
      select Count(member_casual) AS no_of_casual_customers, member_casual
        from WORK.IMPORT
          where member_casual = "casual"
          group by member_casual;
            QUIT;

proc sql;
create view customerType as
      select no_of_member_customers, member_casual
        from memberTable
        group by member_casual
        union
        select no_of_casual_customers, member_casual
        from casualTable
        group by member_casual;
            QUIT;

/*3)d) Most common duration of bike used in minutes*/
/*select code and run to display*/
proc sql inobs = 5;
create table DurationTable As
      select ride_id, MAX(intck('min',started_at_time, ended_at_time)) AS Duration
        from WORK.SPLITTED
        group by ride_id
        order by Duration DESC;
            QUIT;

/*3)e)i) Frequency of bikes collected*/
/*select code and run to display*/
proc sql;
create table bikesCollectedLocation As
      select Count(started_at) AS no_of_bikes_collected, start_Lat, start_Lng
        from WORK.IMPORT
           group by start_Lat;
            QUIT;

/*3)e)ii) Frequency of bikes returned*/
/*select code and run to display*/
proc sql;
create table bikesReturnedLocation As
      select Count(started_at) AS no_of_bikes_collected, end_Lat, end_Lng
        from WORK.IMPORT
        where not missing (end_station_name,end_station_id)
           group by end_Lat;
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            QUIT;

/*3)f)i) stations member customers collecting citebike*/
/*select code and run to display*/
proc sql;
create table bikesCollectedMember As
      select member_casual AS member_customer, start_station_name
        from WORK.IMPORT
         where member_casual = "member"
         group by start_station_name;
            QUIT;

/*3)g)i) stations casual customers collecting citebike*/
/*select code and run to display*/
proc sql;
create table bikesCollectedCasual As
      select member_casual AS casual_customer, start_station_name
        from WORK.IMPORT
         where member_casual = "casual"
         group by start_station_name;
            QUIT;

/*3)h)i) member time interval*/
/*select code and run to display*/
proc sql;
create table memberTimeInterval As
      select member_casual AS member_customer, ended_at_time ,
      case
      when ended_at_time BETWEEN '01:00:00't AND '11:59:00't then 'Morning'
      when ended_at_time BETWEEN '12:00:00't AND '18:00:00't then 'Afternoon'
      else 'Evening'
      end as time_interval
        from WORK.SPLITTED
         where member_casual = "member"
         group by time_interval;
            QUIT;

/*3)i)i) casual time interval*/
/*select code and run to display*/
proc sql;
create table casualTimeInterval As
      select member_casual AS member_customer, ended_at_time ,
      case
      when ended_at_time BETWEEN '01:00:00't AND '11:59:00't then 'Morning'
      when ended_at_time BETWEEN '12:00:00't AND '18:00:00't then 'Afternoon'
      else 'Evening'
      end as time_interval
        from WORK.SPLITTED
         where member_casual = "casual"
         group by time_interval;
```