# Use Cursor to Loop

DECLARE

@Id varchar(50),

@Speed smallint,

@LocationDate DATETIME2(0);

/\* First, declare a cursor. \*/

DECLARE db\_cursor CURSOR

FOR SELECT

Id,

Speed,

LocationDate

FROM AVL.dbo.AVL\_History

WHERE Vehicle = '400-2207' and LocationDate >= '2021-01-01 00:00:01' and LocationDate <= '2021-04-30 23:59:59'

Order by LocationDate;

/\*Next, open and populate the cursor by executing the SELECT statement \*/

OPEN db\_cursor;

/\* Then, fetch a row from the cursor into one or more variables\*/

FETCH NEXT FROM db\_cursor INTO

@Id,

@Speed,

@LocationDate;

/\* SQL Server provides the @@FETCHSTATUS function that returns the status of the last cursor\*/

WHILE @@FETCH\_STATUS = 0

BEGIN

PRINT @Id

FETCH NEXT FROM db\_cursor INTO

@Id,

@Speed,

@LocationDate;

END;

/\*After that, close the cursor:\*/

CLOSE db\_cursor;

/\*Finally, deallocate the cursor:\*/

DEALLOCATE db\_cursor;

# Use Cursor to loop and compare to last record

DECLARE

@Id varchar(50),

@Speed smallint,

@LocationDate DATETIME2(0);

DECLARE

@LastId varchar(50),

@LastSpeed smallint,

@lastLocationDate DATETIME2(0),

@difference INT;;

/\* First, declare a cursor. \*/

DECLARE db\_cursor CURSOR

FOR SELECT

Id,

Speed,

LocationDate

FROM AVL.dbo.AVL\_History

WHERE Vehicle = '400-2207' and LocationDate >= '2021-01-20 00:00:01' and LocationDate <= '2021-01-30 23:59:59'

Order by LocationDate;

/\*Next, open and populate the cursor by executing the SELECT statement \*/

OPEN db\_cursor;

/\* Then, fetch a row from the cursor into one or more variables\*/

FETCH NEXT FROM db\_cursor INTO

@Id,

@Speed,

@LocationDate;

/\* SQL Server provides the @@FETCHSTATUS function that returns the status of the last cursor\*/

WHILE @@FETCH\_STATUS = 0

BEGIN

BEGIN

SET @difference =datediff(second,@lastLocationDate, @LocationDate)

IF @difference> 600 AND @lastSpeed is not null

PRINT cast( @LastId as varchar) + ','+ cast(@difference/60 as varchar)

+ ','+ cast( @lastSpeed as varchar)+','+ cast(@lastLocationDate as varchar) +','+ cast(@LocationDate as varchar)

SET @lastLocationDate=@LocationDate

SET @lastSpeed=@Speed

SET @lastId=@Id

END

FETCH NEXT FROM db\_cursor INTO

@Id,

@Speed,

@LocationDate;

END;

/\*After that, close the cursor:\*/

CLOSE db\_cursor;

/\*Finally, deallocate the cursor:\*/

DEALLOCATE db\_cursor;

# Use Cursor to loop and get the distance

DECLARE

@Id varchar(50),

@Speed smallint,

@Location geography,

@LocationDate DATETIME2(0);

DECLARE

@LastId varchar(50),

@LastSpeed smallint,

@LastLocation geography,

@lastLocationDate DATETIME2(0),

@difference INT;;

/\* First, declare a cursor. \*/

DECLARE db\_cursor CURSOR

FOR SELECT

Id,

Speed,

Location,

LocationDate

FROM AVL.dbo.AVL\_History

WHERE Vehicle = '410-1212' and LocationDate >= '2021-01-01 00:00:01' and LocationDate <= '2021-04-30 23:59:59'

Order by LocationDate;

/\*Next, open and populate the cursor by executing the SELECT statement \*/

OPEN db\_cursor;

/\* Then, fetch a row from the cursor into one or more variables\*/

FETCH NEXT FROM db\_cursor INTO

@Id,

@Speed,

@Location,

@LocationDate;

/\* SQL Server provides the @@FETCHSTATUS function that returns the status of the last cursor\*/

WHILE @@FETCH\_STATUS = 0

BEGIN

BEGIN

SET @difference =datediff(second,@lastLocationDate, @LocationDate)

IF @lastSpeed is not null

PRINT cast( @LastId as varchar) + ','+ cast(@Location.STDistance(@LastLocation) as varchar)

SET @lastLocationDate=@LocationDate

SET @lastSpeed=@Speed

SET @lastId=@Id

SET @LastLocation=@Location

END

FETCH NEXT FROM db\_cursor INTO

@Id,

@Speed,

@Location,

@LocationDate;

END;

/\*After that, close the cursor:\*/

CLOSE db\_cursor;

/\*Finally, deallocate the cursor:\*/

DEALLOCATE db\_cursor;