Following tables are needed to be created:

* create table user\_profile (phone\_number bigint primary key, passwrd char(20) not null, interests char(75) not null);
* create table tweets\_tags (rowID int identity (0,1) primary key, tweet\_value char(256) not null, tags char(75) not null, ttl int, time\_stamp int, latitude float, longitude float);
* create table tag\_to\_ttl (tag char(15) primary key, ttl int);

Following entries needs to be updated in tag\_to\_ttl table. This table should be populated for every new tag added.

* insert into tag\_to\_ttl values ('entertainment', 6);
* insert into tag\_to\_ttl values ('shopping', 72);
* insert into tag\_to\_ttl values ('sports', 24);
* insert into tag\_to\_ttl values ('campus', 18);

Function for distance calculation:

create function distance (@Lat1 float, @Long1 float, @Lat2 float, @Long2 float)

returns float

as

begin

declare @dist float

set @dist = Acos(Sin(@Lat1)\*Sin(@Lat2) + Cos(@Lat1)\*Cos(@Lat2) \* Cos(@Long2-@Long1)) \* 6371000;

return @dist

end

Function for getting current time in absolute number of hours:

create function get\_current\_time()

returns int

as

begin

declare @current\_time int

declare @startdate datetime

declare @enddate datetime

set @enddate = current\_timestamp

set @startdate = convert(datetime, 'Jan 01 12 00:00AM', 0)

set @current\_time = DATEDIFF ( hh , @startdate , @enddate )

return @current\_time

end

Procedure to remove stale tweets. This is accessed by worker role setup on Azure Cloud.

create procedure RemoveStaleTweets

as

delete from tweets\_tags

where ttl+time\_stamp < dbo.get\_current\_time()

go