1. TRIGGER: This trigger is activated as soon as earthquake entry is made in the database.

CREATE TRIGGER EFFECTED\_AREA\_POPULATION ON Earthquake

FOR INSERT

AS

IF EXISTS (SELECT \* FROM Earthquake where Occurance\_Date = cast(GETDATE() as date))

BEGIN

select \* from population where location\_id IN (select LocationID from Earthquake where Occurance\_Date = cast(GETDATE() as date))

END

insert into earthquake values (5,3, GETDATE(), 7, 120, 37);

2. create function Distance( @lat1 float , @long1 float , @lat2 float , @long2 float)

returns float

as

begin

declare @DegToRad as float

declare @Ans as float

declare @Miles as float

set @DegToRad = 57.29577951

set @Ans = 0

set @Miles = 0

if @lat1 is null or @lat1 = 0 or @long1 is null or @long1 = 0 or @lat2 is

null or @lat2 = 0 or @long2 is null or @long2 = 0

begin

return ( @Miles )

end

set @Ans = SIN(@lat1 / @DegToRad) \* SIN(@lat2 / @DegToRad) + COS(@lat1 / @DegToRad ) \* COS( @lat2 / @DegToRad ) \* COS(ABS(@long2 - @long1 )/@DegToRad)

set @Miles = 3959 \* ATAN(SQRT(1 - SQUARE(@Ans)) / @Ans)

set @Miles = CEILING(@Miles)

return ( @Miles )

end