**Report outage:**

reportOutage(houseID  in number, dateOfIssue in timestamp, outageID out number)

*Algorithm:* The procedure would report an outage for the zip code for house occupied by a customer.

The function will check whether outage has already been reported, by comparing the zip-code of the house that has reported it, to the houses existing in the ‘house’ table with the same zip-code.

If house already exist, then no new entry is made into outage table and the previous issue details like outage is and description are displayed to the user.

In the other case the outage table is updated with a new record. The new outage id is displayed to the customer who has registered the issue.

*Input:*   1) houseID

*2)* dateOfIssue

*Output:* If the outage has been reported message will be displayed showing the issue has been reported else a new outage Id will be displayed, corresponding record will be inserted into message table.

/\* 11.Allow a customer to report an outrage. The input is house ID and date and time of the outrage. The system first checks whether there is an existing outrage reported in the same zip code and on the same date. If so it is not a new outrage and the feature simply adds the house ID to the list of house IDs of the outrage if it is not inserted yet. Otherwise, it is a new outrage so please generate a new outrage ID and record the information. A message will be inserted into message table stating that outrage report received. \*/

show errors;

-- Inputs (house\_id, date\_of\_issue)

-- Output (OutageID)

show errors;

Create or replace PROCEDURE report\_outage(house\_id in number,date\_of\_issue in date,outageID out number) IS

affected\_zip number;

zip\_code number;

a\_id number;

affected\_hid number;

o\_id number;

Begin

/\* we first get the zip\_code from the input (house\_id), then based on the zip\_code we will check if the outage has been reported from that zip\_code on that same day \*/

select zip into zip\_code from house\_address where hid= house\_id;

select outage\_zip,oid into affected\_zip,o\_id from outage where zip\_code=outage\_zip and extract(year from start\_time) =extract(year from date\_of\_issue) and extract(month from start\_time) =extract(month from date\_of\_issue) and extract(day from start\_time) =extract(day from date\_of\_issue) ;

/\*Once we know the issue has been reported,we will check if it was this particular house\_id that reported it.If it is,We will give them a message and if not,we will add the house\_id to the affected houses table \*/

select count(hid) into affected\_hid from houses\_affected where oid=o\_id and hid= house\_id;

       if affected\_hid = 0 then

  Insert into houses\_affected Values(o\_id,house\_id);

  Dbms\_output.put\_line('This issue has already been reported.Your house have been added to the affected houses list');

       else

   Dbms\_output.put\_line('You have already reported this issue');

       end if;

/\* If the zip code was not found in the outage\_table from our first query,then the outage will be recorded,an outage\_id will be generated, and a message will be inserted in the message table stating that the issue has been reported. \*/

Exception

when no\_data\_found then

select aid into a\_id from  account,house\_address where account.hid= house\_id and account.status = 'Active' group by account.aid;

Insert Into outage Values (outage\_seq.nextval,'in progress',date\_of\_issue, null,zip\_code);

outageID := outage\_seq.currval;

  Insert into houses\_affected Values(outageID,house\_id);

Dbms\_output.put\_line('The outage id is: ' || outageID);

Insert Into Message Values (message\_id\_seq.nextval ,a\_id,'Issue has  been reported',sysdate);

when too\_many\_rows then dbms\_output.put\_line('too many rows');

End;

select \* from outage;

select \* from message;

select \* from houses\_affected;

select \* from house\_address;

/\* Already reported outage \*/

Set Serveroutput on;

Declare

new\_ticket number;

Begin

report\_outage(5,timestamp '2011-06-20 02:35:10.64',new\_ticket);

End;

/\* A new outage \*/

Set Serveroutput on;

Declare

new\_ticket number;

Begin

report\_outage(4,timestamp '2016-06-20 02:35:10.64',new\_ticket);

End;