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| Software Engineering BS(CS) - V |
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**Question no 6.6:**

* Write Use Case of the following situation:

The department of public works for a large city has decided to develop a Web-based pothole tracking and repair system (PHTRS).

A description follows:

Citizens can log onto a website and report the location and severity of potholes. As potholes are reported they are logged within a “public works department repair system” and are assigned an identifying number, stored by street address, size (on a scale of 1 to 10), location (middle, curb, etc.), district (determined from street address), and repair priority (determined from the size of the pothole). Work order data are associated with each

pothole and include pothole location and size, repair crew identifying number, number

of people on crew, equipment assigned, hours applied to repair, hole status (work in

progress, repaired, temporary repair, not repaired), amount of filler material used, and

cost of repair (computed from hours applied, number of people, material and equipment

used). Finally, a damage file is created to hold information about reported damage due

to the pothole and includes citizen’s name, address, phone number, type of damage, and

dollar amount of damage. PHTRS is an online system; all queries are to be made interactively.

**USE CASE FOR POTHOLE TRACKING AND REPAIR SYSTEM**

**Primary Actor:**

Citizens

**Goal in Context:**

Log onto a website and report the location and severity of potholes via the Internet

**Preconditions:**

* + Citizens can logon to website.
  + Citizen shall report the location and severity of potholes
  + The system can accept a complaint.

**Trigger:**

Citizens can report the severity of pothole via internet.

**Scenario:**

1. Citizen search a website of pothole tracking and repair system (PHTRS).
2. Citizen logon to the website.
3. Citizen enters his/her name, address and phone number.
4. Citizen fills the information about the location and severity of pothole.
5. Citizen click on the ‘done’ button.
6. Citizen can view the details of pothole.
7. Citizen Logout of the website.
8. System should inform public works department repair system.
9. System shall assign an identifying number, size, location, and repair priority to a pothole.

**Exceptions:**

1. The website crashes.
2. Invalid ID or password.
3. Invalid information of pothole.
4. If the necessary information blanks are left empty then the system shall display error.
5. Report not received due to internet issues.

**Priority:**

Determined from the size of the pothole.

**Channel to Actor:**

Via Website by connecting to internet.

**Secondary Actors:**

1. System Manager.
2. Public works department repair system.

**Open Issues:**

1. Should there be a way to report without the use of a ID and password?
2. Is there a way that the website shows the daily details of potholes reports and repaired in the City?