Air University (Multan Campus)

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| Exercise 6.6 |

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| Use-case modeling |

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BSCS-V

# Problem # 6.6

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.

=>Write the use case of above provided problem.

# Solution:

**Use case:** Web-based pothole tracking and repair system

**Primary actor:** Citizen

**Goal in context:** To online report about the potholes .

**Pre-condition:** The system has been designed to get information about the pothole and damage caused (if any).

**Trigger:** The citizen reports about the pothole i.e logs on to website and provides information about the location and severity of the pothole by filling the questionnaire.

**Scenario:**

* Citizen: logs in to website
* Citizen: reports about the pothole
* Citizen: provides the asked information
* Citizen: fills the information about damage file
* Citizen: verifies by submitting information
* Citizen: views the information
* Citizen: logs out the website

**Exceptions:**

* Websites server is down
* Fake information is entered by citizen.
* No such issue exists or if existed ,has been resolved.
* Internet service not available.
* Some important question left unfilled.

**Priority:** Essential, must be implemented

**Frequency of use:** rarely in a year

**Channel to actor:** via website

**Secondary actors:** public works department, internet, repairing team, system manager.

**Channels to Secondary actors:** website is the major channel.

**Open issues:**

* Should there be further option of adding picture of pothole and damage?
* Should the system be able to show live working on pothole?
* Should website be more self defining?