Use Cases Modeling

Assignment 04

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Use case Modeling

Scenario

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 fi le 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.

Requirement

Write use cases for above scenario.

Descriptive Use Cases of Scenario

Use case Title: Online reporting system of Pothole

Primary Actor: User (Citizen)

Level: User Goal

Stakeholders: Users (citizen), department of public works, repair team, system Maintainer

Pre-condition:

1. User must have web access.
2. User should be logged in to web application.
3. User must know personal detail to fill form on portal

Trigger: User can report online pothole to avoid more damage.

Minimal Guarantee/ Post-condition:

When user clicks submit button after filling the form and if an error occurs a message will be displayed to the user asking him/her to try later.

Success guarantee/ post condition:

1. User looks for “public works department repair system” to report the pothole.
2. The web application will display form of empty fields to get information of pothole.
3. Web app asks for information as in: street address, scale size, district, location and repair priority.
4. User will enter all needed information.
5. User will click submit button to inform the team about pothole.
6. Details regarding pothole related to user complaint will be identified.
7. Pothole record will saved by street address.
8. An Id will be assigned to user complaint.
9. Work order data will generated to check the progress status of pothole repairing by an identifying number.
10. User can also have a look on filler material, hours allocated for repairing, repairing crew, and identity number of complaint of pothole.
11. Web App will also asks for any damage (if done) and its cost.
12. A damage file will generated that will hold all information of reported damage.
13. Damage file will also contain citizen name, address, contact info and type and cost of damage.

Extensions:

- **Alternate flow of events**
    1. Users fill the form but it is not submitted.
    2. User is about to fill the form but cancels it.
    3. Information is not given properly.
- **Exceptions**
    1. The complaint that user made has already been solved.
    2. Internet connection drop.
    3. Too much traffic on same web application.
    4. Data or info of pothole will be lost if server is not working properly.