

Automotive Paint Defect Analysis

Software Engineering CSE435

Michigan State University

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Project Overview

- ❑ Our project provides an efficient way for analysts to record paint defects during the assembly process and later create reports on these defects.
- ❑ Motivation for project:
 - ❑ Save paper which was previously used to record defects
 - ❑ Save analysts time when creating reports

Project Novelty

- ❑ Our project implements the system as a web application.
- ❑ We focused on ease of use when making design decisions.
- ❑ We group defects by car and cars by recording sessions.
 - ❑ Analysts do not enter extra info for each defect.
 - ❑ Analysts can better select cars this way.

Overview of Features

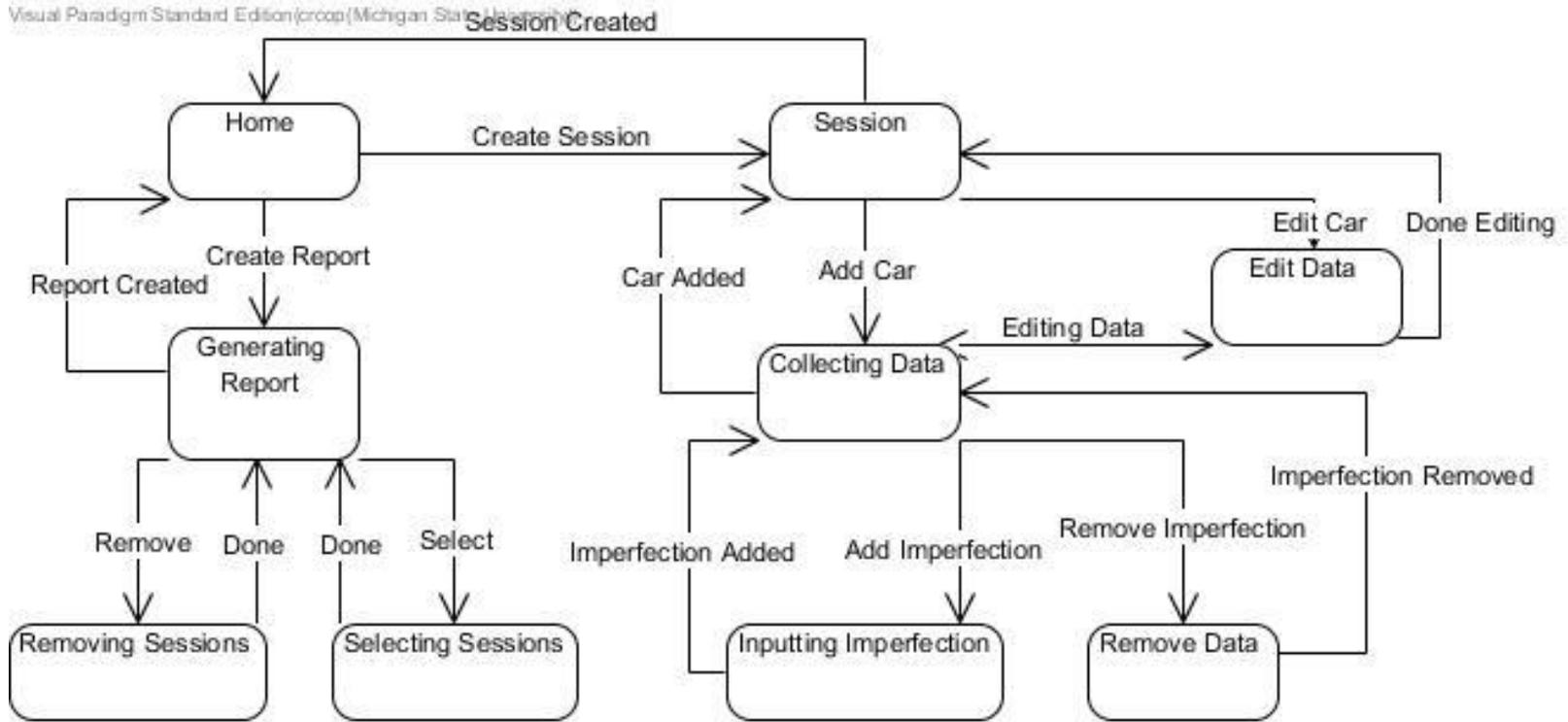
1. Implement a way for analysts to record the defects of a vehicle, including type, location, and severity information.
2. Allow editing of data after it has been entered.
3. Allow analysts to easily create daily, weekly, and monthly reports as well as reports including a custom set of vehicles over a custom time period.
4. Support the analysis of paint defects over time.
5. Ensure the security of the system by requiring user verification.

Domain Research

- ❑ We investigated how GM plants currently record and report paint defects and the surrounding systems.
- ❑ We needed to apply this knowledge to the development of an automated paint defect recording and reporting system.
- ❑ Constraints:
 - ❑ The recording system must be portable, easy to use, and efficient.
 - ❑ The reporting system must be quick and easy to use.

Part II: Model-based View of System

Visual Paradigm Standard Edition (copyright Michigan State University)



Part III: Demonstration

- ❑ Interface is an intuitive web application.
- ❑ Scenario One:
 - ❑ Create a New Session
 - ❑ Add a Car to the Session
 - ❑ Record Defects
 - ❑ Add another Car
 - ❑ Record Defects
 - ❑ Edit a Defect from the First Car

Part III: Demonstration

- ❑ Scenario Two:
 - ❑ Create a report
 - ❑ Select Sessions
 - ❑ Select Cars
 - ❑ Select Report Type
 - ❑ View the Finished Report

Acknowledgements

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