

Nominal Use Scenarios

Nominal Use 1: Professor

Kuilin Zhang is a Civil Engineering professor who teaches CEE 4402 - Traffic Engineering. This course introduces students to traffic engineering, and includes data collection techniques, traffic characteristics, and intersection control. For a specific project in this course, the professor requires that the students go to a specific traffic intersection and collect data regarding the movements of vehicles that interact with the intersection. The professor is tired of having the students collect the data by hand, and wants an easier way for the students to collect the data and for him to gather all of the recorded data. He provides the students with an interactive web application. This web application allows the students to record the traffic data and outputs this recorded information into a csv file for the professor to view and analyze. This csv file includes a first row where the student name, date/time, time interval, and location of intersection is stored. The remaining rows will include the specific vehicle recorded (2-axle or 2+ axle), the time of the vehicle interaction, the direction where the vehicle was coming from, and the turn that the vehicle made.

Nominal Use 2: Student

Robert Johnson, a Civil Engineering undergraduate student at Michigan Technological University, has enrolled in CEE 4402 - Traffic Engineering. This student has been assigned a project that includes collecting data at a traffic intersection. His professor has required him to use a web application that allows users to record data regarding vehicle movements at specific intersections. Robert will use the user interface of the web application by clicking on specific buttons to record the type of vehicle and the specific turn that the vehicle has made. While Robert records his data, the application will be pushing the recorded information to the database where it is stored during the time interval that the student specifies for the data collection. After the student completes his data collections, the web application will convert the recorded information into a csv file that meets the specific specification of the professor.