Traffic Flow Simulator: Analysis Document  
1. Background  
 The \*client\* needs to know, for a \*grid\* whose \*intersections\* are   
 \*modern roundabout intersections\*, the \*average\* \*number\* of \*time   
 units\* \*cars\* spend in the \*grid\* before leaving the \*grid\* for all   
 \*cars\* that leave the \*grid\*. The \*client\* intends to use the   
 \*software\* to find out how quickly \*one\* or more \*cars\* can move from   
 \*one\* \*edge\* to another \*edge\* of the \*boundary\* of the \*grid\* when   
 each \*intersection\* is a \*modern roundabout intersection\*. Eventually   
 the \*software\* may be modified to enable the \*client\* to answer the   
 following \*questions\*: Which \*traffic control devices\* are best at   
 increasing \*traffic flow\*? Can a single \*car\* more quickly move from   
 \*one\* \*edge\* to another \*edge\* of the \*boundary\* of the \*grid\* that   
 contains \*modern roundabout intersections\*, \*stop sign intersections\*,   
 or \*traffic light intersections\*? In general, how does the \*rate\*   
 of \*traffic flow\*, \*number\* of \*cars\* in the \*grid\*, and \*type\* of   
 \*intersection\* impact how \*fast\* a single \*car\* can move from \*one\*   
 \*edge\* to another \*edge\* of the \*boundary\* of the \*grid\*?  
2. Description of Software  
 The \*software\* models a \*grid\* that contains \*modern roundabout  
 intersections\*, and could be extended to include other \*types\* of   
 \*intersections\*.  
 Eventually the \*software\* may be modified to include other \*traffic   
 control devices\* such as \*stop sign intersections\* and \*traffic light   
 intersections\*. The \*software\* will allow the   
 \*user\* to run multiple \*simulations\* and collect output \*data\*. The   
 \*purpose\*   
 of these \*simulations\* is to analyze the \*effect\* of \*modern roundabout  
 intersections\* on the \*number\* of \*time units\* it takes \*one\* or more   
 \*cars\* to move from one \*edge\* to another   
 \*edge\* of the \*boundary\* of the \*grid\*, given different \*numbers\*   
 of \*cars\* in the \*grid\*.  
3. List of nouns (in singular rather than plural form)  
 Client, grid, intersection, modern roundabout intersection, number,   
 time unit, car, software, edge, boundary, question, traffic control device,   
 traffic flow, stop sign intersection, traffic light intersection, rate,   
 type, fast, simulation, data, user, one, effect, purpose, average.  
4. Process  
 The purpose of noun extraction is to quickly generate ideas for class names   
 and functionality. Thus we extract all the nouns from a general description   
 of the software, to find out what sorts of things (nouns) occur in our   
 overview.   
5. Reasons for eliminating a noun  
 5.1 Abstract - does not have physical existence  
 5.2 Not related to objects within the actual software  
 5.3 Used in a noun phrase or to explain something else - out of context and   
 meaningless by itself.  
 5.4 Could be a class, but would work better as a property of another class  
6. Eliminated Nouns  
 Client - 5.2   
 Number - 5.3  
 Software - 5.1  
 Question - 5.3  
 Rate - 5.3  
 Type - 5.3  
 Fast - 5.1  
 Time unit - 5.1  
 Traffic flow - 5.1  
 Simulation - 5.2  
 Data - 5.2  
 Edge - 5.4  
 Boundary - 5.4  
 User - 5.2  
 One - 5.1  
 Effect - 5.1  
 Purpose - 5.1  
 Average - 5.1  
7. Chosen Nouns  
 Grid  
 Intersection  
 Modern roundabout intersection  
 Car  
 Traffic control device  
 Stop sign intersection  
 Traffic light intersection