Larkin LLC is a small furniture manufacturing company in US. It has one distribution center in RALEIGH, NC 27603. Manufacturer’s shop is located far from closest cities, so customers often make orders via phone or website. Company offers white-glove delivery for purchased commodities.

Supply chain department handles this important part of the business.

Company owns 2 trucks, which make delivery in one of 3 time shifts:

1. Morning 8am - 12 pm
2. Afternoon 12pm - 6pm
3. Evening 6pm - 10 pm

Trucks perform deliveries during the day in such way that one is doing max 2 trips a day, another truck performs only one trip the same day. Truck has with max weight 10000 lbs and max cubes 1400.

Between shifts, truck’s driver have a rest, e.g. one driver executes morning and evening shifts, but other driver implements afternoon and next day they swap shifts.

Dispatcher gathers all orders for a day, puts them in 3 separate Loads (orders for drivers).

Facts that needs to be considered during constructing Load:

1. Preferred time frame specified by customer;
2. Order parameters.

Also dispatcher resolves different conflicts.

Driver prints Routing List, where all further things are specified:

1. Order of stops;
2. Address;
3. Date and shift;
4. Purchase Order # and description of Cargo;
5. Contact Phone#.

Also he is responsible for control truck loading.

Task:

1. Upload Order.csv to the system;
2. Allow Dispatcher to manage orders;
3. Allow Dispatcher to create Load with orders inside;
4. Allow Dispatcher to resolve conflicts during load creation process;
5. Allow driver to download Routing List in any format (even ASCII table is suitable).

Notes:

* Web UI would be a plus;
* For simplicity of trial task, weight is not important.