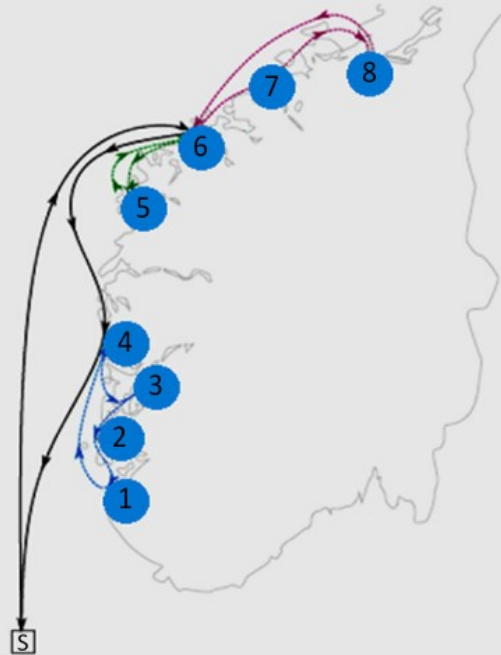


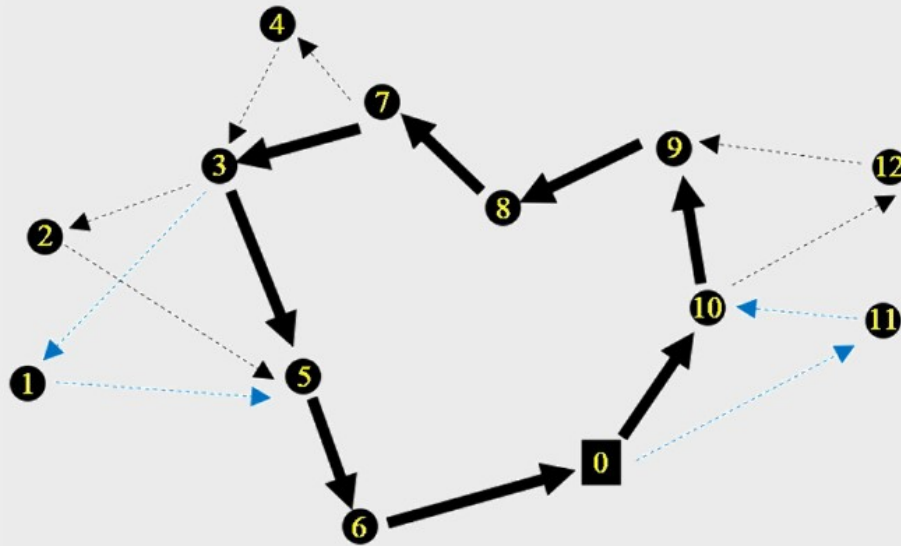
# ASSIGNMENT #1—a

Suggest a good (!) solution representation. Not more than one page of explanation.

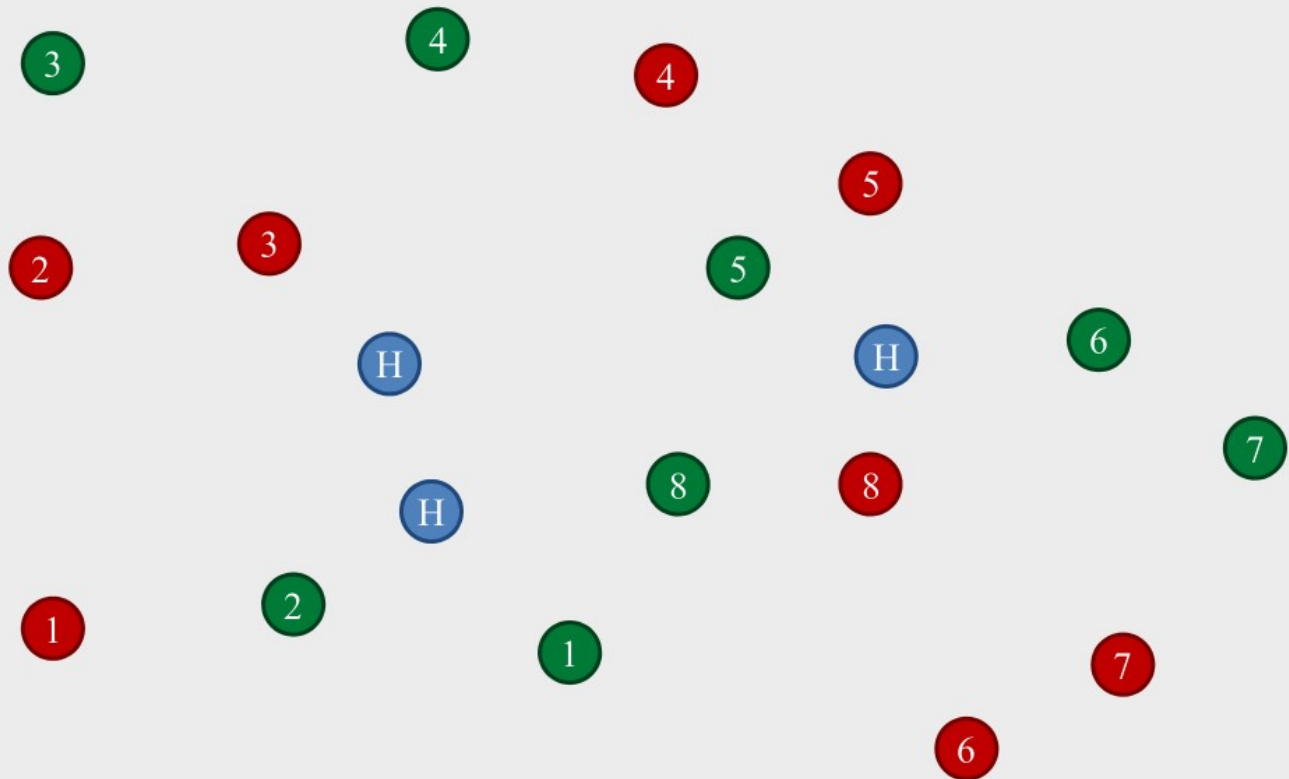


# ASSIGNMENT #1–b

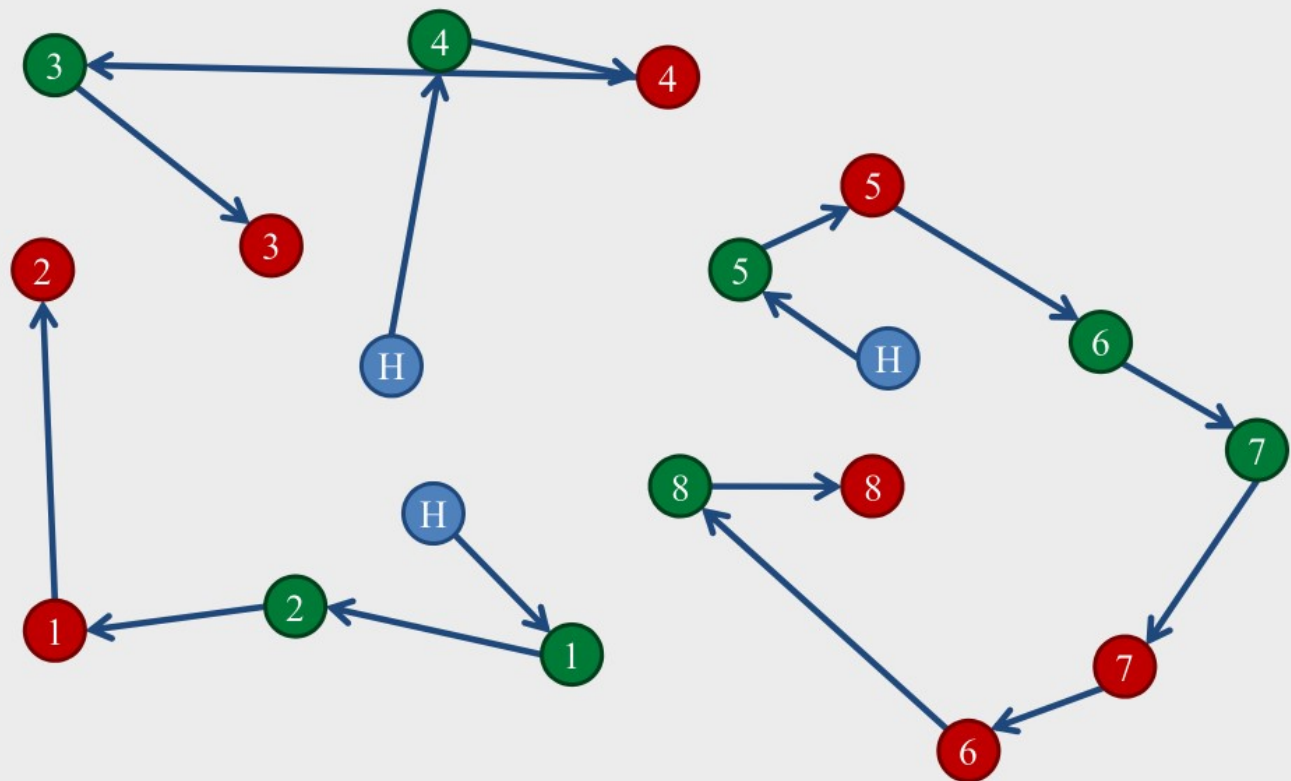
Suggest a good (!) solution representation. Not more than one page of explanation.



## Pickup and delivery



## Pickup and delivery



## ASSIGNMENT #2

- Read data from the text file
- Generate a random solution (a function which gets inputs and gives a random valid but not necessarily feasible)
  - Have a dummy vehicle for the calls that are not handled.
- Check the feasibility (a function which gets a solution and checks if it is feasible)
  - Capacity of the vehicle
  - Time windows at both pickup nodes and delivery nodes
  - Calls and vehicles compatibility
- Calculate the objective function (a function which gets inputs and a solution and gives the cost)
  - Cost of reaching to the first customer from home (vehicle does not return home)
  - Cost of transportation
  - Origin and destination node costs
  - Cost of not transporting

## ASSIGNMENT #2

- Make sure you know all the assumptions – e.g. if a vehicle arrives early, it should wait until the node opens
- We will have more assignments in continuation of assignment #2 (they will be built on it)
- The final project will be very relevant to the series of assignments (doing this assignment is not a waste of time!)
- Deliver the assignments as soon as possible so that I can tell you if you have done it correctly (esp. #2)