Demystifying Networking
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Lecture - 02
Analogy for Week 1 The CEO's Challenge

If you remember, my TAs had asked a question of how does a website load or how does packets are transferred from the web server to the web browser? So, in order to understand this, let us first take a real life problem. Let us take the problem of transporting goods from one part of the country to another part of the country. In order to help you understand this here is an animation that you can watch.
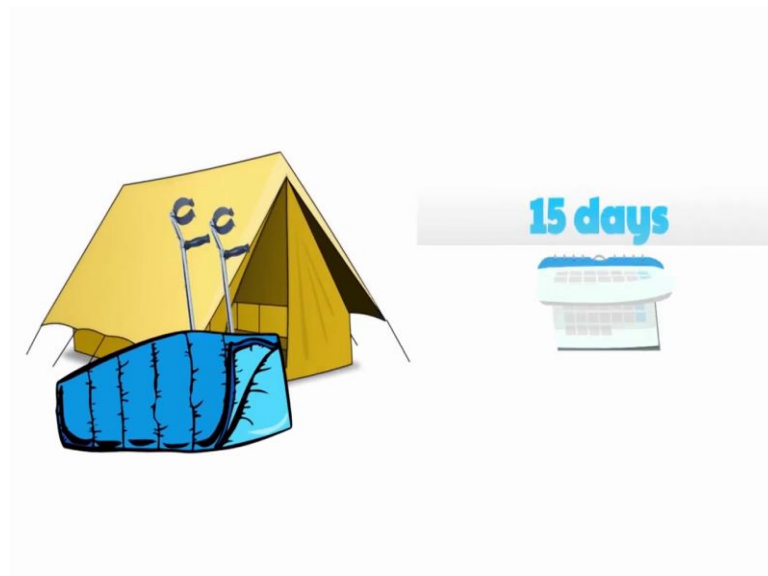
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Trekking is a fun and adventurous activity for most, but it can be intimidating to go on your own. No need to worry though. The Adventure Travels Private Limited is organising a hands on trekking workshop in Manali. However, the supplies will be provided by Sports Equipment Inc. Meet Sania, she is the CEO of the sports equipment company. Sania wants to ensure that the equipment reaches on time.
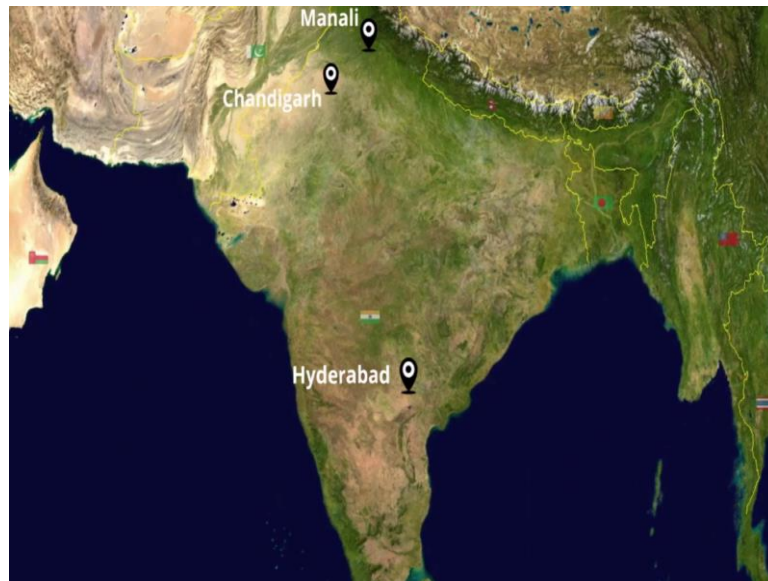
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It's important for her business. She hands over this responsibility to her business manager, Amir. Being a responsible manager, Amir immediately calls up the workshop manager at Adventure travels, Meera, to understand their requirements.
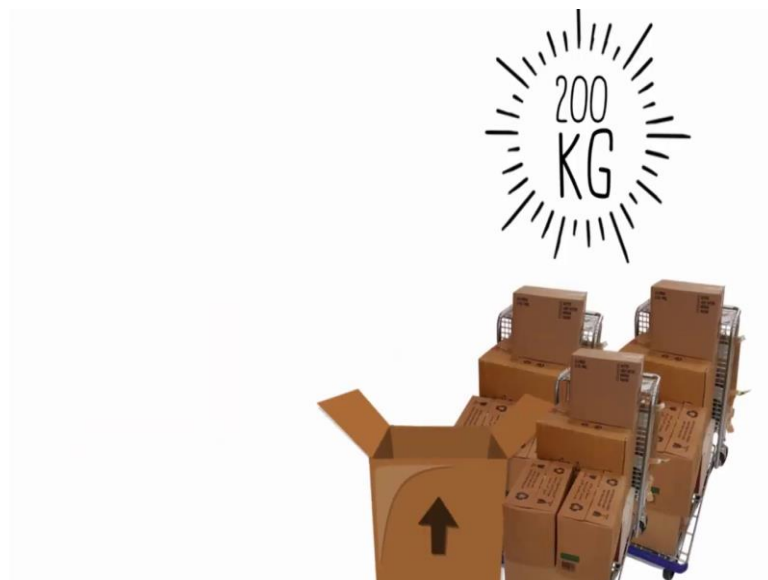
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The workshop is in 15 days. The equipment has to be transported from the company's office at Hyderabad to the workshop site in Manali. Amir states the delivery requirements we got from Meera to the delivery team.

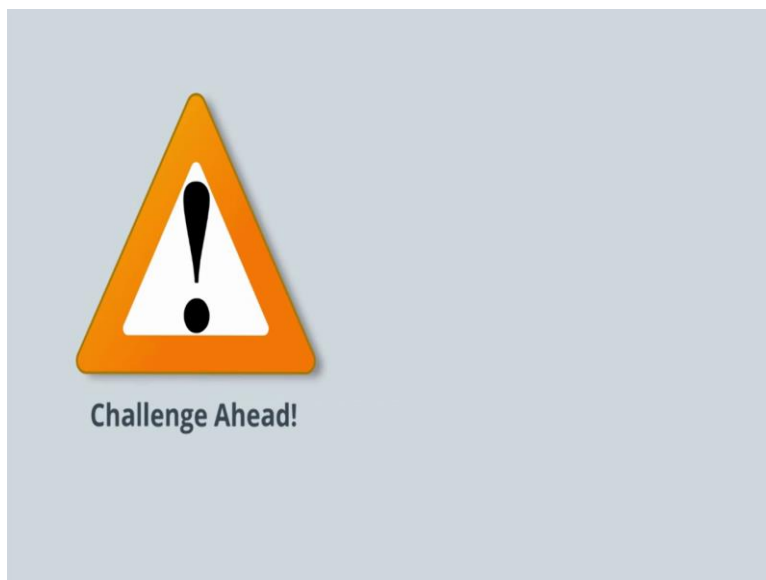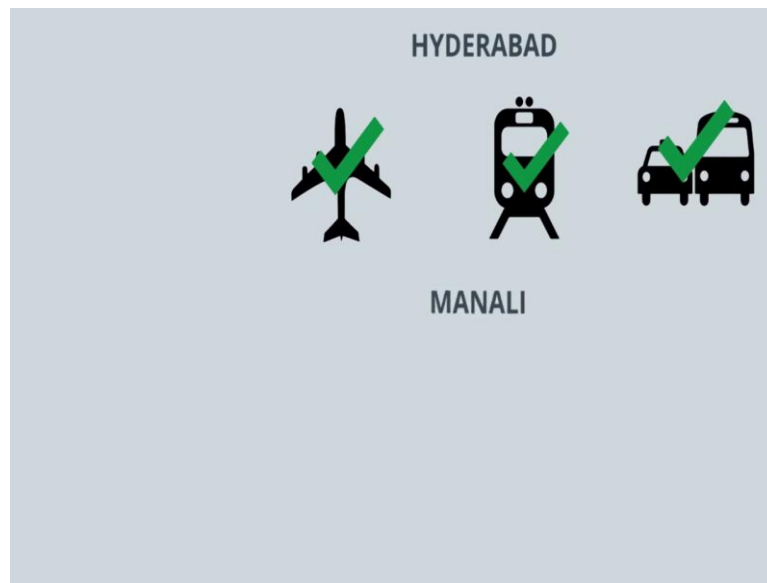The shipment is over 200 kgs, out of which, 50 kg needs to reach within 5 days. To make sure everything reaches properly and on time, the delivery team has people on contract to deliver the shipment in person.
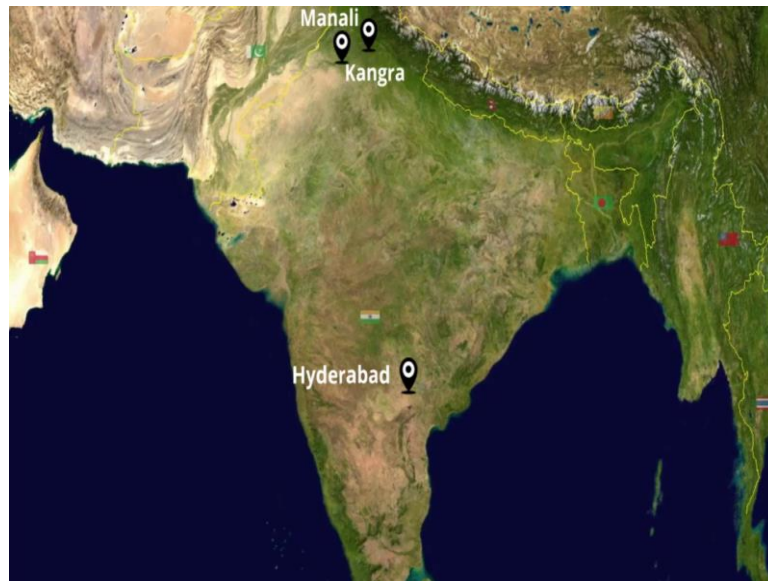
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However, there are some challenges. First, Hyderabad has access to all 3 modes of transport however, Manali does not. Not air, not rail only road. Moreover, some equipment cannot be taken by air due to the airline restrictions.
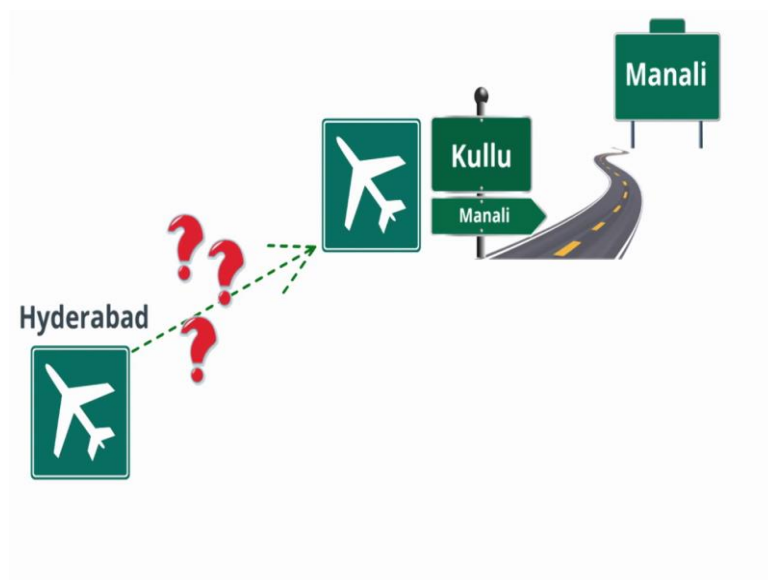
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The nearest airports to Manali are in Chandigarh and Kullu. The nearest train station is in Kangra.

Flights from Hyderabad can land at Chandigarh, from where one can take the route to Manali. Even Kullu is a possibility. However, the flight schedules are quite unreliable. The delivery team takes these decisions and puts the code on each box in the shipment which is used by the delivery boys to reach the destination. The delivery boys head out on different routes with the intent of reaching the same destination. However, some of them might go missing, their phones

might be unapproachable, they might have left the job or even sometimes might have misplaced the parcel.

Note that it is required that the delivery boys only use public transport for the journey. So, this is the situation. Now it's time for some questions. Now that you have seen the animation, you are now familiar with the problem. Problem is to transport goods which can be dismantled from one part of the country to another part of the country. The question is how is this transportation to be achieved, given the constraints that were shown in the animation?

So, what you need to do now is to answer two questions. One, come up with your own scenario of how you would solve this problem given this constraints. Once you have thought about the answer post your answer in the discussion forum. That is the first part. Second part is to read somebody else's answer and identify what might be the challenges that persons answer may give rise to.

For example, in some cases it may not be very efficient in terms of time, in some other cases it may not be meeting some constraints. So, the second part is you have to comment on another learner's answers in the discussion forum. Having done that, in the next week we will come back to this animation, we will discuss some sample solutions and the pros and cons of each solution. Then we will relate this to the corresponding concepts in networking.