

Software Conceptual Design
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Lecture - 02
Thinking of Software in terms of Components

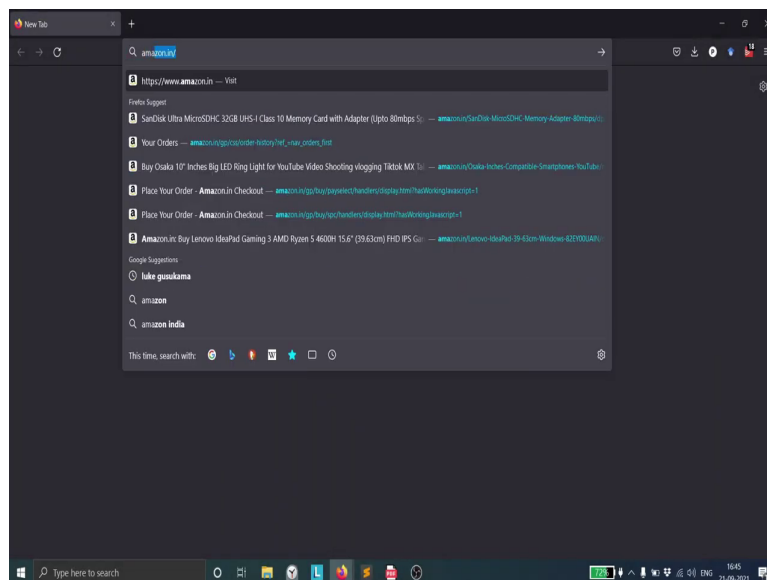
Sorry I did not notice you, I was busy buying something from Amazon. They seem to have everything on their site, and the process is so effortless. How do you think they built such a software system?

Well, I think one major component is their inventory management system, they keep track of their inventory in such an intelligent way.

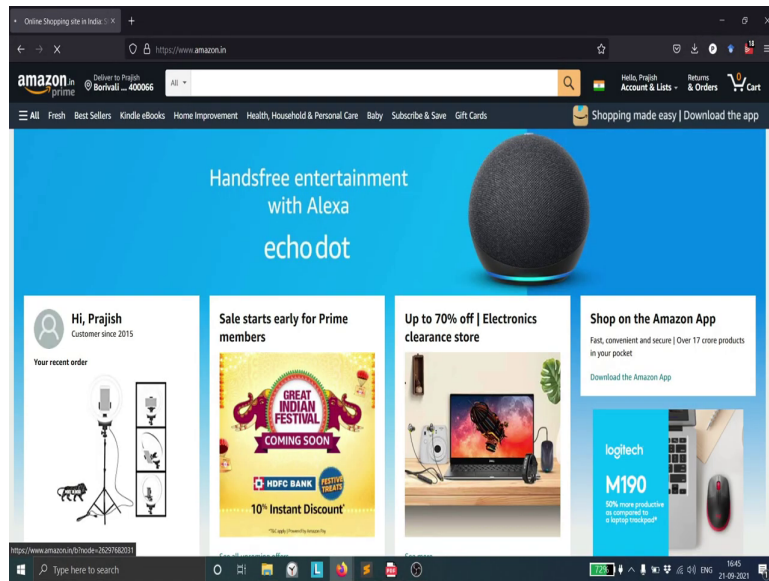
What do you mean by intelligent, can you elaborate?

So, inventory management is the act of measuring the amount, location, pricing and the mix of products available.

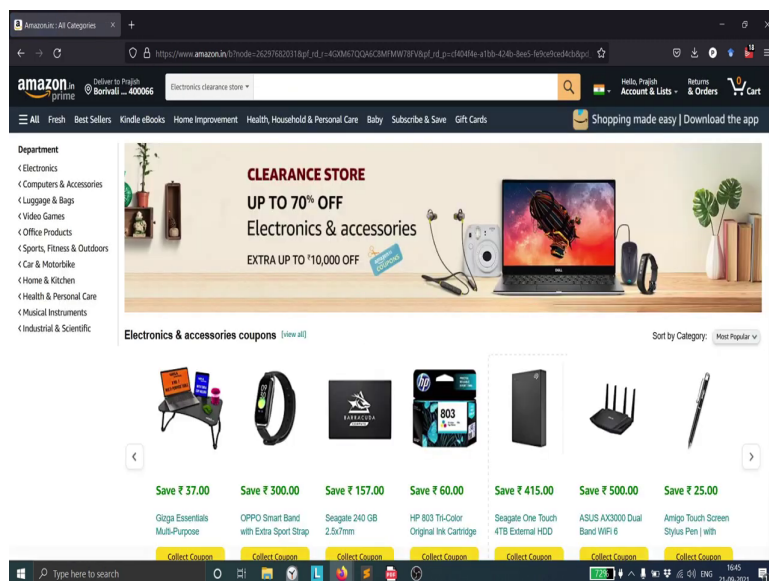
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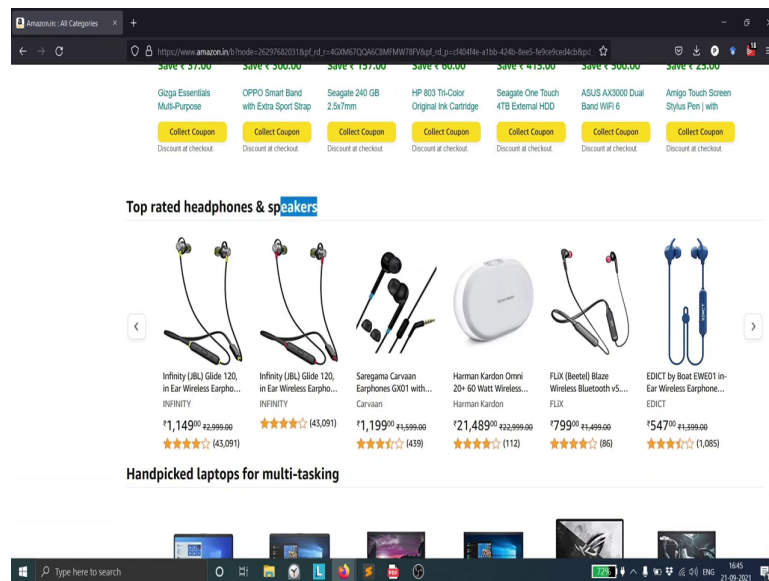
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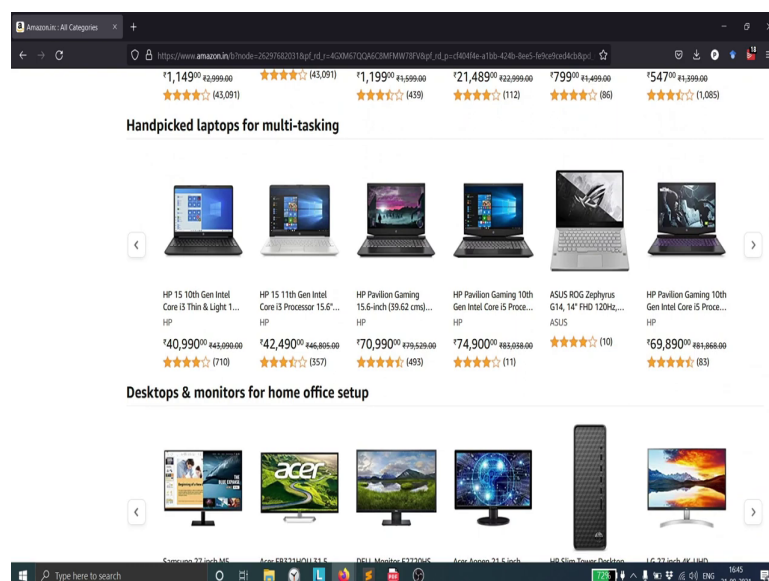
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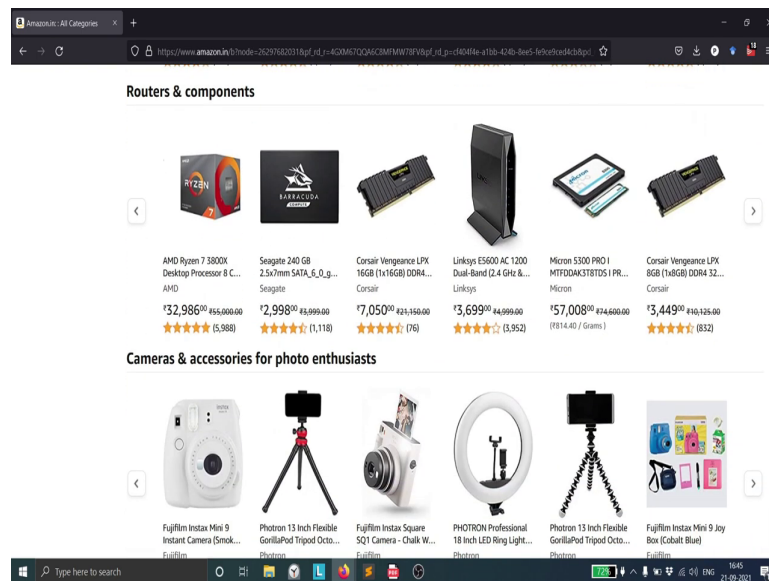
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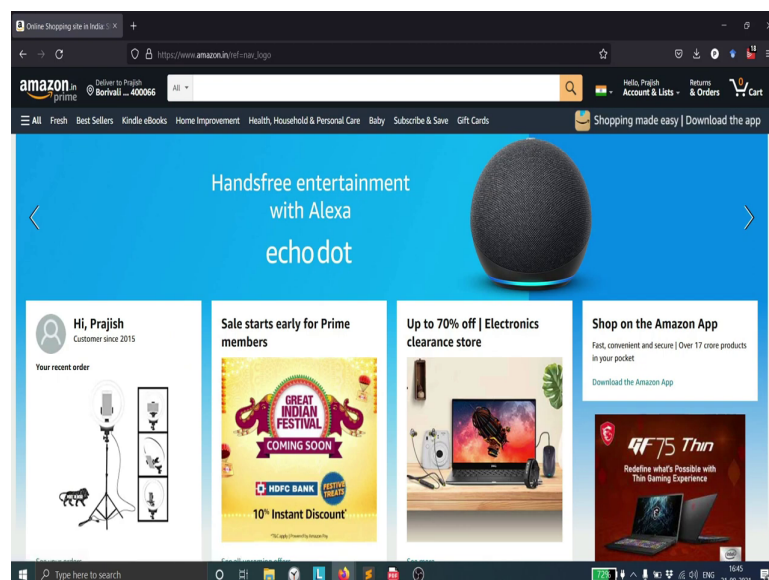


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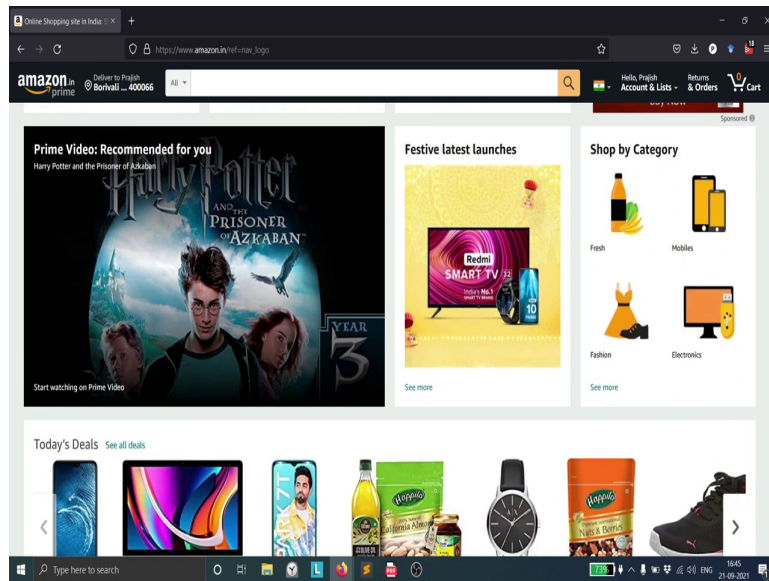


So, when we go to the Amazon home page, we see that their inventory gets updated based on current purchasing and seasonal trends and fluctuating customer demand. Hence, logistics and analytics play a large part in inventory management.

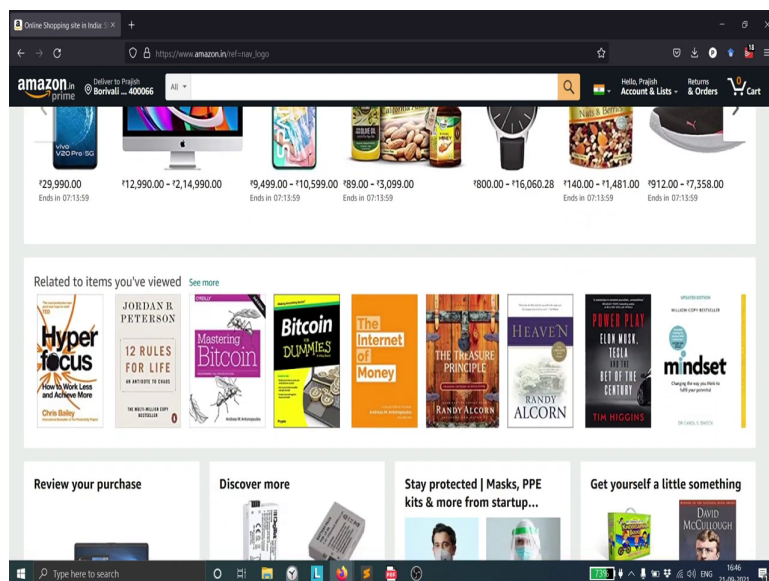
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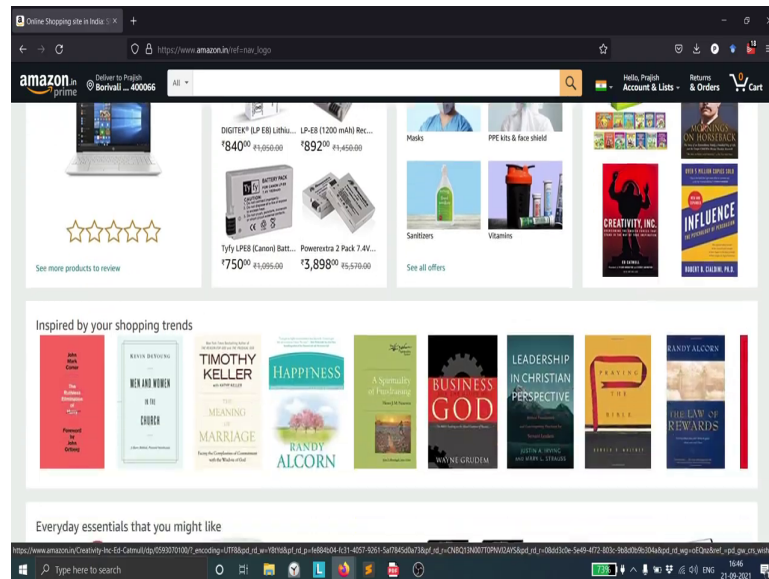
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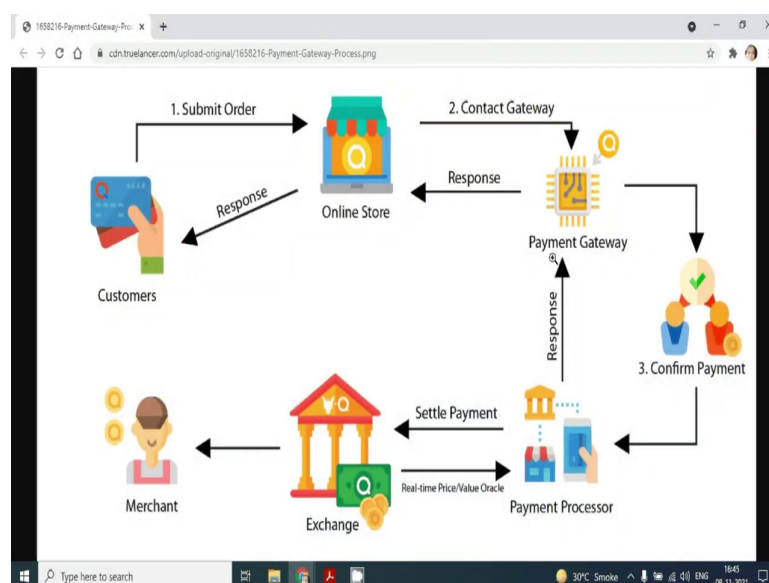
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So, it is very interesting to see how my Amazon home page could be quite different from yours. Amazon customizes my home page based on the items I viewed as well as my shopping history.

Yes, that is true. My home page will be based on my shopping history, moreover, the ease of buying on the platform is also essential. The payment gateway is another module in the platform which offers ease of payment for both the buyer and the seller.

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Payment gateway is a service that authorizes electronic payments like online banking, debit cards, cash cards, etcetera. Payment gateway acts as a middleman between the bank and the merchant's website or application. When a user wishes to make a payment, the Amazon website sends the encrypted card information to the payment gateway. Then the gateway confirms the validity of these details with the bank, and the required amount of money gets transferred from user's account to the Amazon account.

So, we looked at two components, the inventory management system and the payment gateway.


But I think there are many more components which make up the website.

Yes, that is true; so many components make up an e-commerce website such as Amazon.


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Reflection Spot

We discussed that Amazon has several components. Could you list a few of them ?



Please pause the video and write down your responses




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So, here is the question for you, we discussed that an ecommerce website has several components, could you list a few of them? You can pause the video, write down your responses and then continue.

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Summary

- Discussed various components of a large software system
E.g. Amazon
 - Inventory Management System
 - Payment Gateway
- Software can be divided into separately addressable components called **modules** that are integrated to satisfy requirements


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In this video, we discussed various components of a large software system for example, the inventory management system, the payment gateway and so on. So, it is important for us to think in terms of components. Software can typically be divided into several addressable components called modules, which are all integrated to satisfy the overall requirements.