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Week 3
Software User Interfaces - Introduction to Interaction Design

Professor Prajish Prasad: In the previous week, we looked at how we can gather and analyze requirements. And we also looked at how we can create user stories, which can help us understand what different users want to do within a software product, which is of value to them. And if you have noticed, most of the user stories require you to create a user interface or a UI, which implements that feature.

And this interface acts as the interaction point between the user and the system. So, the next step is to create such user interfaces, like web pages, which contain elements like buttons, text fields, navigation, etc., which realize these user stories and requirements. And although this seems very straightforward, there are principles and guidelines to create effective user interfaces.

And that will be the focus for this week. And all of us interact with hundreds of such interfaces every day. The apps that we use, the websites we browse, the software programs we work with. And even physical objects in our day to day lives.

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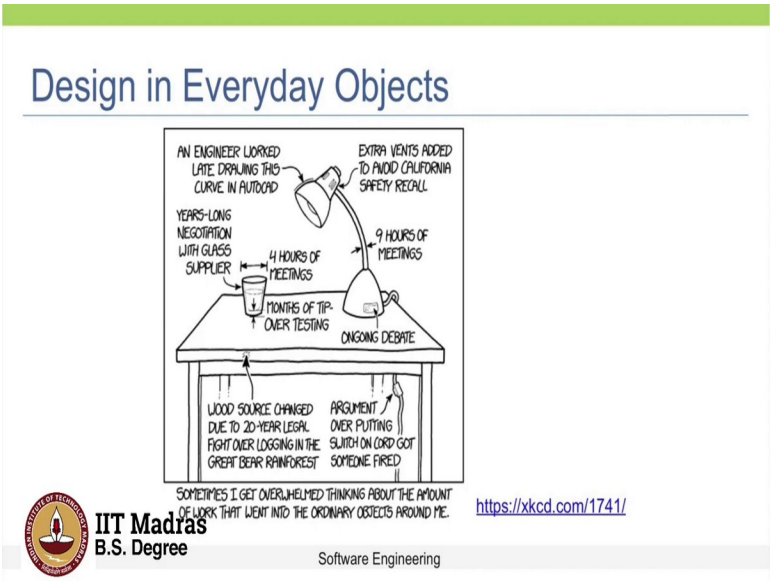

So, ordinary objects that we use every day have undergone several rounds of discussion, and deliberation to come up with the final design. And this picture, it shows how much discussions and deliberations are needed to come up with an effective user interface.

Professor Sridhar Iyer: Now, let us discuss about websites and mobile app interfaces. Do we need to place so much emphasis about what is shown, where it is shown, how it can be accessed and so on? If you think about it, the form of your product is what the user sees first. And then only comes the functionality of your product. So, if the form of the product or the interface, as they say, if that is not appealing enough or intuitive enough, then it is either going to be rejected by the users, or they are going to find it extremely cumbersome to use.

So, the key idea here is to give the user a good experience while using your software. So, the software should be easy to use, it should be easy to learn, it should not be confusing, and so on. We will learn about all this in the upcoming videos. There are certain guidelines we should follow to design these websites and apps.

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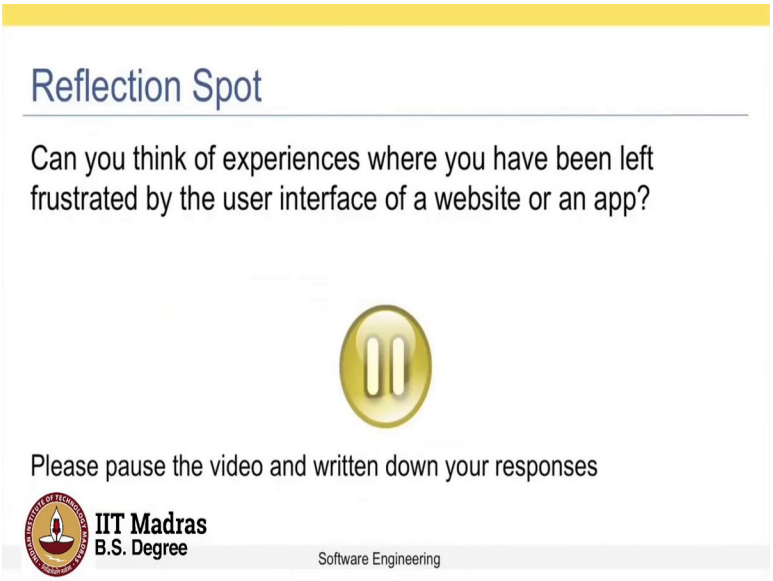

So, now let us think about the different websites that you have been to, some which have been excellent, and some which you have really not liked. And think about what are these experiences that frustrate a user. We will pause here, you can write a few of your ideas, and then proceed.

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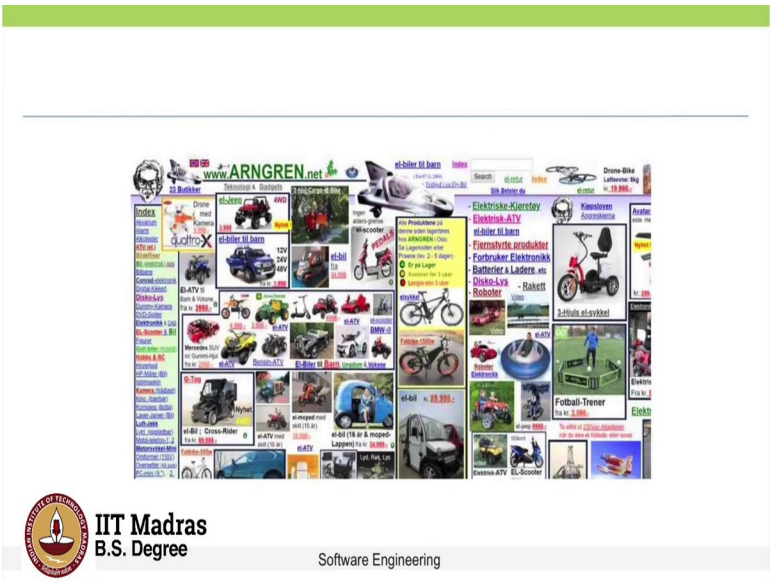

Professor Prajish Prasad: So, here is an example of a website. And I am sure if you go to it, it will leave you frustrated. So, looking at this image, you can see that the layout is cluttered. There is no hierarchy. There is no navigation. The typography is very poor. There is random use of colors. So, all of these are things which can frustrate users. Of course, there is a very extreme example not all websites are like this.

In addition to this, other factors such as slow load time, there are too many ads, if the color scheme is inconsistent, these can also frustrate users. So, we now understood that we need to take care of designing the UI as well. In software companies, there are specific job profiles which look at the user interface aspects. So, companies have specific roles such as interaction designers, user experience and user interface developers that look at these aspects.

And this broad field of designing effective user interfaces is known as interaction design. By interaction design, we mean designing interactive products to support people in their everyday working lives.

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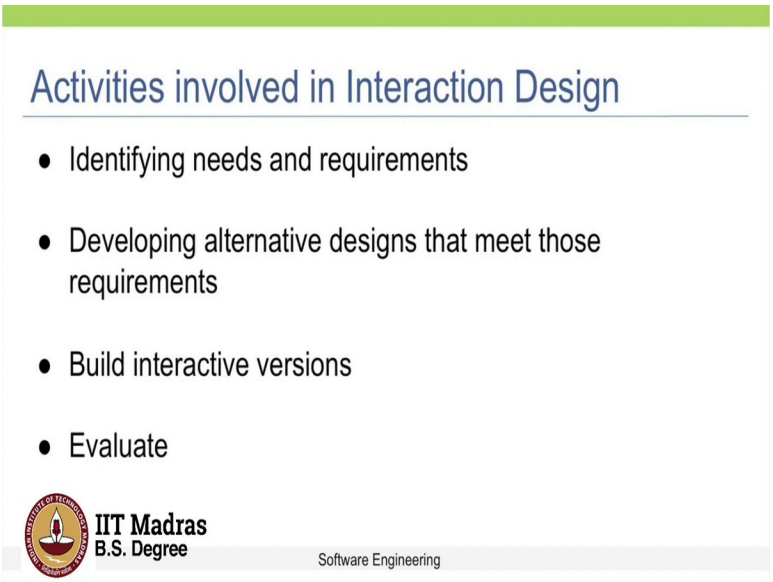

Professor Sridhar Iyer: To summarize, the activities involved in interaction design are identify the needs and requirements, developing alternative designs that meet those requirements, build interactive versions, and evaluate which of these designs are actually usable for the user.

Now, this looks very similar to the agile process that we talked about earlier. There are a lot of similarities. The reason is that both of these keep the user at the center or at the focus of creating the product. Going on, we also talked about gathering of requirements, analysis of requirements from the various stakeholders. Now that we have done that, the next step for us is to develop alternate designs that can satisfy these requirements. Then evaluate them before we jump into implementing the software.

Now, how do we go about developing these alternate designs? There are various techniques such as storyboarding, paper prototyping, and so on. In the next videos, we will see some of these techniques and we will also do some hands-on activities along these lines.