Software Conceptual Design
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Lecture - 10
How to Start Creating a Software Conceptual Design

In the previous LxI, we had asked you and how you would go about designing a mood based music player. Mood based music player that sounds really interesting, but I am wondering what does it do?

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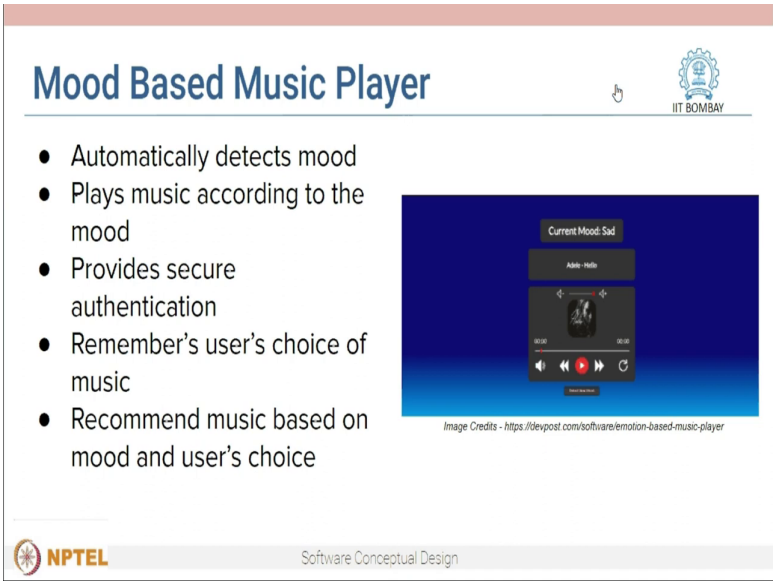

A mood based music player automatically detects mood, plays music according to the mood, provide secured authentication, remembers users choice of music, recommends music based on the mood as well as users' choice.

This sounds very cool, but I am still wondering how should I start designing such a mood based music player?

Yeah, it is an interesting question; last week we learned about the various phases and models in a typical software development; however, they only provide a framework, but do not really guide you on how to think while creating a software.

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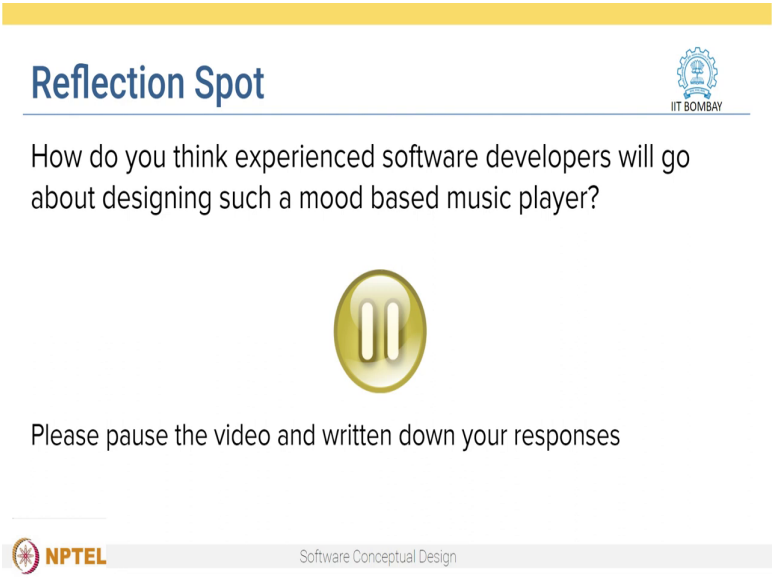

Right, so I was thinking, how will an experienced software designer go about designing such a mood based music player?

Yeah that is a good thought. So, learners, here is a reflection spot for you. How do you think experienced software developers will go about creating a mood based music player? Pause the video and write your answers in the notebook.

So I think that experienced developers would have worked on similar systems in the past, and I think that they will refer to these systems that they created as reference points.

Yes, that is true they also have an integrated view of the system and tend to continuously think about the why, what and how of the design.

The why, the what and the how; can you explain it in some more detail?

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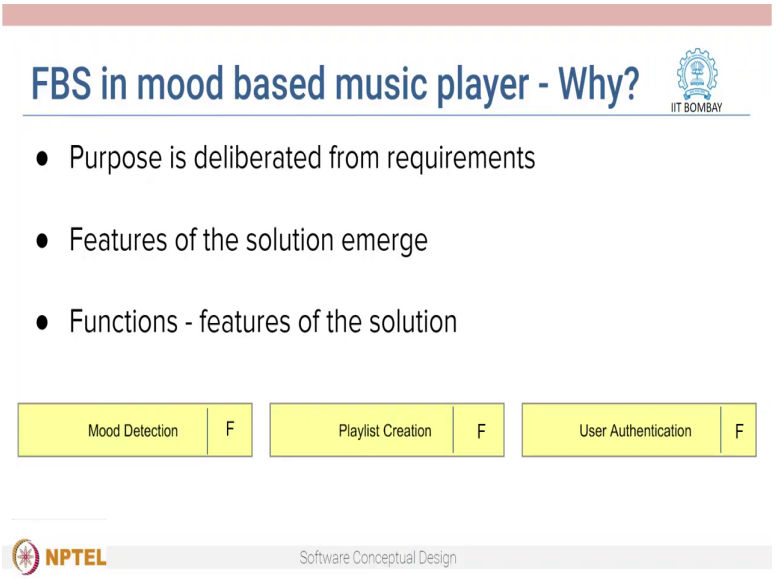

The why; the purpose of software design is often deliberated from the requirements after this deliberation, the features of this solution are envisaged they often map to the requirements. The features of a design solution are called as functions. For the mood based music player, it could be more detection playlist creation user authentication, to name a few.

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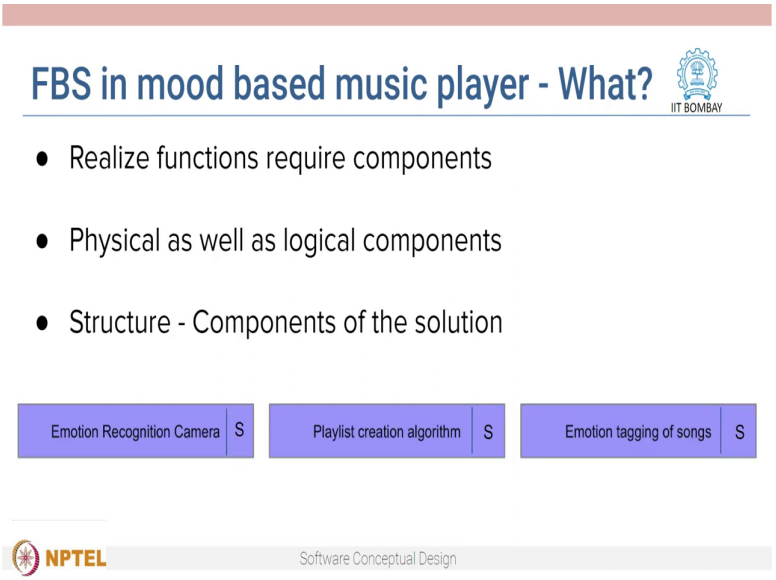

The what: to realize the functions in the solution, physical as well as logical components are required. These components are referred to as structures. In the mood based music player,

there could be an emotion recognition camera, some algorithms to automatically generate playlist, emotion tagging of songs to name of you.

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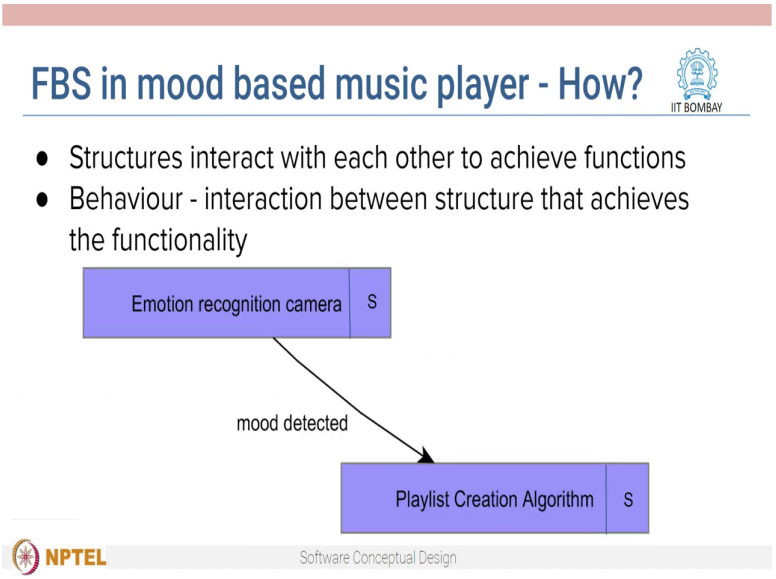

The how: the structures interact with each other to achieve the function. For example, the emotion captured it recognizes the user emotion then provides it to the playlist generator which creates a playlist based on the mood. Behaviour refers to the interaction between the structures that result in achieving the purpose of the design.

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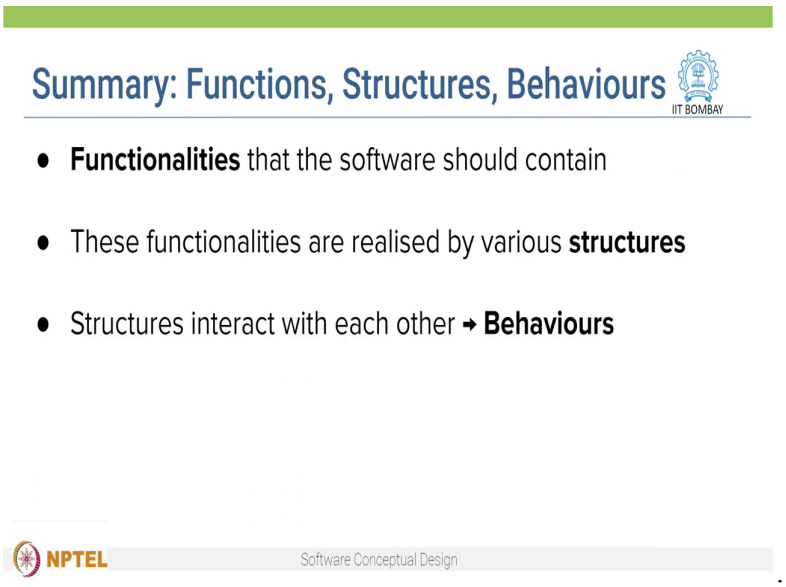

So, now, I think I am understanding what you mean. So, to start creating a software design, we could think of the functionalities that this design will contain and these functionalities are realised by various structures that interact with each other and these interactions are known as behaviours.

It is a good summary; indeed, we would we have only started thinking about function structures and behaviours individually we would need to integrate them together and let us see how to do this in the next LeD.