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Part 3

Now we get to the design stage. There are a number of different decisions a team will need to make before they can actually begin work on this stage. A key decision is what programming language or languages will be used. For example, one question might be whether to use an interpreted language such as Python or JavaScript or a compiled language such as C. There are other decisions, such as what type of version control they will use; Git is very popular, but there are others which are also good ... To some extent, these choices will depend on what skill set the team already have.

So, deciding how the software will meet the stakeholders' requirements is a key challenge. A major part of this is how the users interact with the software. In computing terms, this is known as the user interface. User Experience (UX) is a separate area of development and we will look at this in more detail in another lecture. Now, an important concept to help meet stakeholder requirements is prototyping. So, what do I mean by prototyping? Well, prototyping is creating an early version of something. The point is it should give stakeholders a clear idea whether the design will meet their requirements. This is really important because, for the stakeholders, the prototype is the first time they see a piece of software they can use. They can decide what they like about it and what they don't like.

However, looking at it another way, it gives the developers an opportunity to decide if they need to make major or minor changes to the design. Say the software is very slow, but the stakeholders like the way it looks. In this case, the developers can focus on improving performance, rather than changing the user interface. Getting stakeholder feedback is a key part of iterative/agile approaches to software development. As you can see, all of these decisions can have a major impact on the speed of development, the quality of the software and also in financial terms ... increasing or reducing the cost of the software.

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Answers



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