Software methodologies

Software lifecycles - Exercise solutions

> **Exercise 1:**
>
> Create a table like the one below (in a piece of paper, or in a text editor), and fill each cell with a YES or NO, depending on whether the specified feature is part of the corresponding lifecycle.

> *Solution:*

	Cascade	**V**	**Iterative**	**Spiral**
It is simple and easy	YES	YES	NO	NO
It generates intermediate versions of the product	NO	NO	YES	YES
Suitable for projects with uncertain requirements	NO	NO	YES	YES
It lets us evaluate the risks of the chosen solution	NO	NO	YES?	YES

> **NOTE**: in terms of *risk evaluation*, spiral model is better than iterative model.

> **Exercise 2:**
>
> Our company is going to develop an application to manage the accounting of a cinemas enterprise. The customer still doesn't know what he expects from the application, and we want to use a really new technology we don't control yet. According to this information, argue which lifecycle model(s) are the most suitable for our purpose, and which one(s) are NOT recommended.

> *Solution*:

As requirements are not clearly set from the beginning, we should not choose cascade nor V model. Besides, as we are going to use a technology that we don't master yet, we should take care about the risks along every iteration. So, in this case, **spiral** or **iterative** models are suitable.

> **Exercise 3:**
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> A teacher from the Higher Polytechnic School of the University of Alicante wants to develop a program to help him correct his students' exercises. As he is very busy, he has asked a group of old students to do it for him. We assume that, as he is a computer scientist, he knows perfectly what he wants from the very beginning. It is a small project that should not take a lot of time. According to this information, argue which lifecycle model(s) are the most suitable.

> *Solution*:

In this case, requirements are perfectly set from the beginning of the project, and it is a small project. So **cascade and V** models are more suitable. We could even choose an iterative model, although in this case it could take more time to finish the project due to the intermediate iterations and customer's feedback. Spiral model is not suitable for small projects, so we must discard it.