1

--Here I will discuss the importance of agile and plan-driven development from (Sommerville, 2016, pp. 73-75)

--The agile approach is more useful for the small and dynamic projects, using agile approach can make changes on the way of developing a project process. In the development methods it contains “Requirements engineering” and “Design and implementation”. The is approach goes it a sequential order to develop a project however, if there is a any request changes it goes back to the first step and make changes. Most of the people chose agile so that they can get feedback from customers, and it allows for changes to be made as the process needed.

--The plan-driven approach is almost like the agile approach however this approach is more into plan-based development, in other words first they develop a plan for the project and there is a step between “Design and implementation” and “Requirements engineering” which is “Requirements specifications” which allows to build a project according to “user requirements” and “system requirements”. Agile uses the user’s feedback to make changes in the project but for plan-driven approach they collect the requirement from user’s before they build the project.

This process is not flexible compared to agile approach because they just have to build the whole project before they show to the end-user’s however, they can make request to be made in order to change in the process and this approach can do that after the prototype is made.

The plan-driven approach is time taking and suitable for the larger projects when it comes to agile approach it is more flexible and changes can be made from the feedback, but it is more suitable for the smaller projects.

2

In this question I will be explaining what extreme programming is and describe the key practises and how it is related to the general principles of agile methods

The extreme programming is a widely uses agile method of software development that includes practices such as scenario-based requirements, test-first development, and pair programming.

In other words, Extreme programming is an Agile project management methodology that targets speed and simplicity with short development cycles and less documentation, so it is more modern approach version of agile.

**Key practises in extreme programming**

**Pair programming**: it is where programmers work in pairs, rather than individually to develop a code. So each programmers is assigned a unique task so they work simultaneously to develop a entire code or project.

**The Planning Game**: The development team and the customer get together to discuss and approve a product’s features. At the end of the planning game, developers plan for the upcoming iteration and release, assigning tasks for each of them. So the customer is a member of the development

**On-site Customer** : the end customer should fully participate in development. The customer should be present all the time to answer team questions, set priorities, and resolve disputes if necessary.

**Continuous Process** : The practice of integrating code regularly and releasing the code on a cadence has been recently popularized by the movement also known as “DevOps” which originated the XP practices.

3

It describes the scrum approach to scrum is an Agile project management methodology involving a small team led by a Scrum master, whose main job is to remove all obstacles to getting work done. Work is done in short cycles called sprints, and the team meets daily to discuss current tasks and any roadblocks that need clearing.

4

Without taking the increased complexity and required change management into account, scaling agile can be troublesome to replicate when hundreds or thousands of knowledge workers have to work according to the principles of an agile manifesto that was formulated with smaller, independent, competent units in mind.