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Roll Number: 45		CA Assignment Number: 1
Title of Lab Assignment: Proof reading of research papers.		
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CA Tutorial No: 1

Aim: Proof-reading of Research papers.

Topic: Extreme Programming in Software Development Process.

Abstract: Extreme Programming (XP) is an agile software development methodology that revolves around customer satisfaction, adaptability, and close collaboration. It features core principles such as iterative development, customer-centricity, and a strong embrace of change, emphasizing rapid feedback and the delivery of high-quality software. XP practices, including Test-Driven Development (TDD), pair programming, and continuous integration, contribute to its success in fostering efficient teamwork and sustainable development, making it a valuable framework for delivering software that meets evolving customer needs

Introduction:

Extreme programming (XP) is a well-known agile software development methodology created by Kent Beck. As the name suggests, XP takes programming best practices to the extreme, thus assisting in the development of good quality software, which has a higher probability in satisfying customer needs within a reasonable time frame. XP comprises several practices of which, pair programming is considered as being very important in ensuring coding quality. With the increase in the popularity of XP, pair programming has also attracted much attention even though it already existed in early 1995. In pair programming, two persons sit together and work collaboratively to write software codes. One of the developer acts as the “driver” and the other one as the “navigator”. Normally the driver is the one who types codes and the navigator is the one observing the work of the driver and identifies any tactical defects and provides strategic planning.

Pair Programming in Education:

The introduction underscores the prevalence of pair programming in educational settings and its particular advantages for novice students.

The paper seeks to delve into the factors that influence the effectiveness of implementing pair programming in education and offers guidance for educators.

It highlights the benefits of pair programming, such as the transformation of individual learning into collaborative learning, and its association with the Extreme Programming (XP) methodology.

The research approach for this paper includes a systematic literature review and semi-structured interviews with five students.

Recommendations put forward in the paper propose the "full pair programming process," which emphasizes effective communication, knowledge sharing, and iterative development. The ultimate goal is to improve the quality of pair programming in an educational context.

Global Collaborative Software Development with Extreme Programming (XP):

This introduction emphasizes the paramount importance of reliable communication in the realm of global collaborative software development.

The paper focuses on the adoption of the Extreme Programming (XP) methodology within the specific context of the Lattice Trading System reengineering project. In this project, customers based in Boston collaborated with an offshore development team in Hangzhou, China.

The key strategies to mitigate communication risks in this global collaboration included iterative knowledge transfer and the execution of development steps across different geographical locations.

In terms of applying XP in a global context, the project team leveraged parallel development and communication to enhance communication quality and prevent delays. Additionally, the paper highlights the emphasis on iterative processes and skill-matched execution across distributed teams.

The paper concludes by asserting that Extreme Programming (XP) can be effectively employed in global software development projects, provided that the challenges associated with communication are effectively addressed.

Comparing Extreme Programming (XP) and Waterfall Model in Software Development:

This introduction initiates a comprehensive exploration of software development methodologies, focusing on agile approaches, particularly Extreme Programming (XP).

It sets the stage for a comparative analysis between XP and the traditional Waterfall model, with a specific focus on factors like time constraints and risk management.

XP is presented as a methodology that offers rapid delivery and reduced exposure to risks. It places a strong emphasis on simplicity, effective communication, teamwork, software quality, productivity improvement, and risk minimization.

In contrast, the Waterfall model is described as a more conventional approach, characterized by distinct phases, and less adaptable to changing requirements.

The introduction suggests that XP is particularly well-suited for software development, with a specific mention of its advantages in the context of gaming applications, where the need for swift delivery and risk reduction is paramount.