	Pangasinan State University Urdaneta City, Pangasinan		READING LOG
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Block	A	Course	Bachelor of Science in Information Technology

Introduction to Application Development and Emerging Technologies

Application Development – process of **creating a computer program** or a **set of programs** to perform a different task that a client/business requires.

• App building process: gathering requirements, designing prototypes, testing, implementation, and integration.

Software Engineering - it is a branch of engineering that focuses on **developing software products**. It involves applying a **systematic**, **disciplined**, and **quantifiable approach to software development**, **operation**, and **maintenance** — essentially applying engineering principles to software.

- Significance of software engineering: reduces complexity, handling big projects, to minimize software costs, to decrease time, effectiveness, and reliable software.
- Categories of Software Products: application software (office suites, word processors, spreadsheets, etc.), system software (operating systems, device drivers, desktop environments, etc.) and, computer programming tools (assemblers, compilers, linkers, etc.)
- Essential Attributes of Good Software Products: functionality, usability, reliability, performance, security, maintainability, reusability, scalability, and testability.
- Software process: Waterfall a linear approach to software development with distinct phases, Agile a flexible, iterative approach to software development, with an emphasis on rapid prototyping and continuous delivery, Scrum a popular Agile methodology that emphasizes teamwork, iterative development, and a flexible, adaptive approach to planning and management, and DevOps a set of practices that aims to improve collaboration and communication between development and operations teams, with an emphasis on automating the software delivery process.
- Common software issues: corrupt drivers, malware attacks, slow downloading and uploading, new applications don't install, and outdated systems.
- Software engineering ethics: Software engineers shall commit themselves to "making the analysis, specification, design, development, testing, and maintenance of software a beneficial and respected profession."

Emerging Technologies - technologies whose **development**, **practical applications**, or both are **still largely unrealized**, such that they are figuratively emerging into prominence from a background of nonexistence or obscurity.

• Characteristics of emerging technology: **not defined by newness**, **coming into being**, **not-yet fully understood or researched**, and **unfulfilled but promising potential**.

Some of industry 4.0 trends and innovations in 2024: Artificial Intelligence (AI), Human Augmented and Extended Reality, Advanced Robotics, and Network and Connectivity.

Introduction TO Application Development AND Emerging Technologies - INTRODUCTION TO APPLICATION - Studocu

<u>Software Engineering - Definition, usage, and Best Practices (castsoftware.com)</u>

Importance of Software Engineering: Key Reasons (knowledgehut.com)

Category:Software - Wikipedia

Software Engineering | Characteristics of good Software - GeeksforGeeks

Software Processes in Software Engineering - GeeksforGeeks

Common Software Problems & How You Can Fix Them - Programmers.io

Everything to Know About Software Engineering Ethics | Fellow.app

The Defining Characteristics of Emerging Technologies and Emerging Practices – George Veletsianos, PhD

Top 10 Industry 4.0 Trends in 2024 | StartUs Insights (startus-insights.com)