ZÁRÓVIZSGA KÉRDÉSEK

angol nyelvű villamosmérnök képzés

Embedded system

- Describe SDLC model and software development phases used for industry level software development.
- Describe the most important rules (phases) of software products' requirement analysis.
- Describe the differences between iterative methodologies and waterfall software development model. Present main features of iterative methodologies and provide practical examples based on one sample method (Scrum, Kanban or XP).
- Describe waterfall method as a software development model. Provide the advantages and disadvantages. Present V-model as an extension of waterfall.
- Describe agile as a theoretical background of iterative software development models. Present the advantages and possible disadvantages as well.
- Present Scrum as iterative software development model and its main principles. Describe and compare the practical details to another model.
- Present Scrum as iterative software development model. Provide a short technical background and focus on Scrum rules and team behavior.
- Present Kanban as iterative software development model and its main principles. Describe and compare the practical details to another model.
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- Present XP as iterative software development model and its main principles. Describe and compare the practical details to another model as well.
- Describe progress follow-up in Scrum, including planning details, meeting rules and burn-down chart using.
- Describe progress follow-up in Kanban, including basic rules, board usage and queuing theory.
- What is a version control system, why it is needed for software development? Present the most important attributes of traditional (centralized) ones and the modern (distributed) ones.

- Present the both types of version control systems and give a comparison of them. Describe their features, concepts, advantages and disadvantages.
- Describe branching differences in traditional and distributed version control systems.
- Provide some basic concepts that make your software code more reliable and less error prone.
- Describe continuous integration as a concept and as everyday activity.
- Functional, timing and implementation issues of embedded systems.
- Concept and types of real-time systems.
- The main features and practicable options of Hard real-time systems.
- The main features and practicable options of Soft real-time systems.
- Computer architectures. The structure and main features of von Neumann and Harvard architecture.
- The concept, types and general characteristics of multiprocessor systems.
- Types and general characteristics of peripheral management.
- Definition and general features and structure of computer networks.
- Structure and general charasteristics of industrial networks.
- Frequently used industrial buses. RS485, Industrial ethernet, CAN.