Flexible Business Software for Startups

Motivation

Enterprise resource planning (ERP) systems play a vital role in today's enterprises. They provide comprehensive standard solutions to support critical business processes. However, using a fully-fledged ERP system is often not practical for startups that depend on flexibility. Instead, young companies rely on lightweight solutions such as spreadsheets or individual business applications. While these solutions address their needs in the short run, successful companies will outgrow them when enhanced planning and reporting functionality is required. At this point, companies will be forced to implement ERP systems in complex migration projects. Nevertheless, even after ERP system implementation, it is not guaranteed that the systems will operate unchanged for an extended period. Changing market requirements force companies to react, resulting in costly process adjustments in ERP systems.

Goal

For these reasons, we need to rethink how we build ERP systems. Most existing architectures are decades old, leading to many constraints and missing the opportunity to leverage the latest technologies to their full potential. Hence, we envision a next-generation ERP system based on executable and customizable business process models and cloud-native technology. The system should enable startups to flexibly pick business processes as required instead of deploying a fully-fledged ERP system as we know it today. Relevant startup processes might cover finance/controlling, purchasing, or human capital management. This bachelor's project will explore and build possible architectures and develop a prototype of such a system.

Project setting

In this project, you will advance and expand the vision of new business software while being free to explore ideas and suitable technologies. As part of the project, you will rethink how business software is built from the ground up and implement a prototype using cloud-native technology.

We will provide you with the required knowledge of the current challenges of enterprise software and introduce you to cloud-native development techniques. Thanks to our

cooperation with the SAP New Ventures & Technologies team, your contributions will significantly impact SAP's vision for a composable enterprise.

Skills

Prior knowledge and experience with business applications and SAP are not required. General experience with developing applications using public APIs (e.g., mobile apps, web applications, hyperscalers) is desirable and programming experiences with front-end frameworks (e.g. React, ...), SQL, and backend programming languages such as Python are beneficial. Only *motivation* to work as a team, to communicate results, and to rapidly get familiar with recent technology is necessary.

Contacts

For questions and details, visit us in the Villa on Campus II or write us an email:

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We are looking forward to shaping the future of business software with you!