Modernize Hospital Discharge Data Submission Application

Project Background

In most states, hospitals are required to submit accurate and complete discharge data files to the state collection agency each calendar quarter. Managing the collection and submission of this quarterly data to federal and state agencies can be a difficult and time-consuming task. Hospitals need to maintain knowledge of and compliance with rapidly changing rules, as well as have staff with the required technical expertise to manage the process.

CheckNet is utilized by hospitals, ambulatory surgery centers, as well as state data agencies and hospital associations to reduce errors and streamline the collection of discharge data. Easily adapted to the different needs and requirements of any state data agency, the CheckNet solution allows for direct submission of discharge data files via the internet.

Project Summary

Students will develop a modern containerized CheckNet application moving the application into the cloud hosted by Microsoft Azure. The front-end of this application is a web UI composed from independent UI microservices.

Students will also receive training and develop in Domain Driven Design which is a methodology where developers work with the domain expert to visually create a model of the business domain. The business domain are the terms used to communicate about concepts in the domain and all of the business rules in the domain. Students will gather information for the domain and graphical models from the domain expert and model it together. This graphical representation of the business domain helps everyone quickly understand the business domain, how things relate to one another and drives the design of the software.

Project Details

Over the course of this Capstone project, students will accomplish the following high-level goals:

- Complete Domain Driven Design Training provided by Intalere
- Develop the project in an Agile development methodology
- Gain real-world experience participating in a collaborative, product-engineering environment
- Research and engage with container technologies, including Docker and Kubernetes as well as work with additional technologies such as Visual Studio, Microsoft Azure .NET Core, and SQL Server
- Ideal student candidates will have experience in Visual Studio and .NET Core/C#
-
- Team Size: 3 students
- POC: Joe Morrison