Cencorp – SPC data Monitoring / Dashboard & Reporting System for Electronics Assembly Lines

26.8.2020

Introduction

You can be sure to find many products manufactured globally ranging from consumer products to car electronics as well as industrial products manufactured by Cencorp Automation robots since 40 years. In order to increase productivity for our customers we also offer SPC tools for monitoring production and optimizing line and machine performance

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Project goals

To create a single page web application for monitoring and visualizing SPC data (Statistical process control) from production equipment in manufacturing lines. Additionally a java based android application for alerting operators can be developed on Zebra PDA SDK

- **Preferred technologies (mandatory ones bolded)**
  - **MS Visual Studio**
  - C#
  - CSS 3
  - **Crystal reports, reporting engine**
  - **Single page application**
  - React
  - Java/TypeScript
  - Webpack
  - **Dotnet Core 3.0 SDK**
  - **MS SQL Server**
- **Finding best graphical elements for visualizing data**
- Creatiting user interface with a good usability

Requirements for the students

- Moderate programming skills but a creative and problem solving mindset is required
- Ability to visualize data in innovative way
- An interest in robotics and manufacturing processes is a bonus
- Ability to combine user interface desing and creativity for best usability

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Legal Issues

Intellectual Property Rights (IPR):

- The client gets all IPRs to the results with source code

Confidentiality:

- The client will share some confidential information with the students.
- NDA is required

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Client

Since 40 years Cencorp Automation Oy has delivered robots for electronic industry globally. Our customers are in car manufacturing, green energy, motor and pump control business and EMS business amongst others. We deliver individual robots or complex production lines based on our modular machine and SW design. Our company is agile with 150 employees globally and with a SW team located in Finland. Our sales last year reached 20 M€.

Mikael Lehtinen, Product Manager or Jarko Nieminen, SW team manager will be available for all required scrum sessions. Email-support and Skype/Teams when needed

Work can be performed from home office, Aalto premises and Teams/skype meetings. Due to current Covid restrictions no external workers are allowed in Cencorp Salo factory.

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Client representative

Product Owner:
Mikael Lehtinen, Product Manager, SW.

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Preselected Student Team Members

- None

Additional information

Present application developed in Visual Studio 2008 can be used as a reference for design. A database instance with scripted data queries will be installed for hands on real production data on applicable MS server.

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