Overview
Olympus Scientific Solutions America (OSSA) desires to recreate their Visual Basic.NET software that runs capacitance and dissipation tests on micro coaxial cables into the LabVIEW software. They want users with little or no training regarding programming or software to be able to operate the recreated software with ease.

Objectives
- Determine any compatibility issues and restrictions between current hardware and software.
- Establish communication between LabVIEW and the current hardware that is used by the Olympus.
- Recreate current software using LabVIEW which is originally developed using Visual Basic programming language.
- Maintain functionality, if possible, with the original software to make an easy implementation for the production employees with little to no knowledge of programming.

Approach
- Obtained the customer needs from The Olympus SSA Company via an in person meeting, and email communication throughout the first three weeks of the semester.
- Performed extensive research on compatibility between the LabVIEW software and Olympus hardware (LCR meter and USB/GPIB Interface).
- Downloaded drivers available at the National Instruments website and the Keysight Technologies website respectively to connect the LabVIEW software and the hardware at the Olympus facility.
- Analyzed the Visual Basic code given by the Olympus SSA company.
- Understand the process flow of the capacitance and dissipation measurement program in Olympus.
- Recreated the similar process flow into the LabVIEW software.
- Visited Olympus facility to test the codes and communication between the LabVIEW software and the Olympus hardware.
- Got same final values of capacitance and dissipation in LabVIEW software with the Visual Basic software.
- Print and save image files option available in LabVIEW, which resembles the original Visual Basic code.

Outcomes
- Reduced training time required for employees to understand code by implementing a simulation mode.