Graphical User Interface Design for Automated Control Systems
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Graphical user interface has been an important design tool for many professionals and companies. In our research, we are designing a graphical user interface for an automated control system at the University of Missouri Research Reactor (MURR) to operate a new INAA (Neutron Activation Analysis) pneumatic sample injection system which sends samples for irradiation to the reactor core. Design of the control system was accomplished using a data acquisition, instrument control, and industrial automation software program called LabView. The graphical user interface design will make the user's interaction as simple as possible, allowing the user to manage an automated control system, which is in charge of controlling a machine that takes a sample from its initial position, then to the reactor core, and next to a gamma counting machine for analysis. The user will enter all required specifications directly into the control panel. The interface design can understand the commands and send the right electrical signal to the machine for activating the needed components, resulting in realization of the task specified by the user. Also the inner programming is able to store the basic information of the user. Our goal is to develop a graphical user interface that provides a very simple and efficient way of operating an automated control system.