The design process begins with identifying a need, from there a developer would address the constraints on the technology they are trying to develop. The next step is to research and compile all the available information that is pertinent to the problem at hand. Once knowledgeable in the subject area, an engineer would likely have to develop multiple solutions to the problem and select the most promising design. Once a design is selected, the next logical step is to test and implement the design. This step may be broken down into multiple steps such as simulation & emulation and may even cause the designer to revert to an earlier step if a fatal flaw is discovered. Xilinx ISE is a software tool for synthesis and analysis of HDL designs. It enables the developer to synthesize designs, preform timing analysis, generate a schematic, simulate the response of a design to varying stimuli and configure the device. The first step in the design process where ISE may be of use is the “developing solutions” phase where it may be used to synthesize the designs. It is especially useful in selecting a design, because it allows for a plethora of different analysis to be conducted via simulation. It is however, not capable of physical emulation because it is a software package. The software proves invaluable in the synthesis and analysis of designs where the level of complication is sufficient that the design must be implemented via abstraction over a straightforward approach.