

VHDL and Computer Aided Design (CAD) Tool Teaching Aid for Future Engineers

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ABSTRACT

Recently, PLDs have replaced fixed function ICs in digital electronics application due to their advantages. VHDL is widely used in programming PLDs such as CPLD and FPGA among others. Introduction to VHDL, will give an advantage to future engineers for their career development. Since VHDL is a hardware description language, the teaching and learning process must be intuitive enough to help students to gain better understanding. Xilinx ISE software is one of the synthesizers available and used in the industry. An interactive and animated teaching aid has been developed to employ the advantages of e-learning pedagogy so as to optimize the teaching and learning process. This paper is to present the developed teaching aid and its interactive

Esteem Academic Journal

features in assisting users in designing simple application of digital systems using VHDL (text entry) on PLDs platform.

Keywords: *e-learning, HDL, VHDL, Xilinx, FPGA, PLD*