**CPE 343 – Computer Organization & Architecture**

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**Lab # 2**

**Title: Design the combinational circuit using conditional signal assignment in VHDL.**

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**INTRODUCTION:**

VHDL provides more than one method to implement same logic using different commands.

* Equations
* Truth-table

1. IF ELSE
2. When Statement

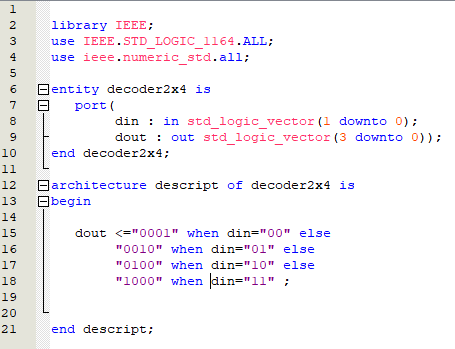
And to know about Arithmetic, assignment, logical and multiplying operators.

**LAB TASKS: (In-Lab Tasks)**

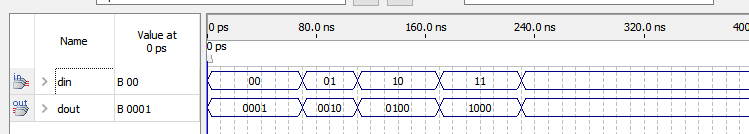
Implementation of Decoder 2x4. There are several ways to do it but the easiest one is by using when statement.

**Task 1:**

1. VHDL Code

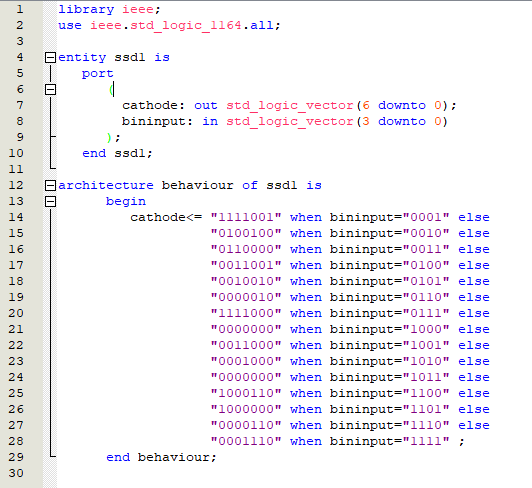


1. Results (VWF)

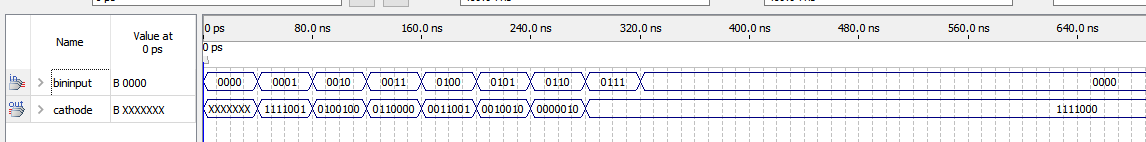


**Task 2:**

1. VHDL Code



1. Results (VWF)



# CONCLUSION:

In this lab I learned how to use conditional statement for hardware coding. And created the decoder and seven segment display.