8-bit bus driver

An 8-bit bus driver is needed placing values on the bus. The high level interface to this using is shown below.



Inputs: Din : STD\_LOGIC\_VECTOR (7 downto 0)

Drive : STD\_LOGIC --When Drive is asserted high, the output xBus is driven to the value of Din. When Drive is not high, xBus is given the value “ZZZZZZZZ”

Output : xBus : STD\_LOGIC\_VECTOR (7 downto 0)

* **Write the VHDL ENTITY and ARCHITECTURE code for this 8-bit Bus driver.** Don’t forget to use the LIBRARY and USE clause for using std\_logic.
* **Modify an earlier testbench to test this architecture.** It will also need the LIBRARY and USE clause for using std\_logic. The testbench needed is not extensive. Drives values of “11111111”, “00000000” and “01010101” to the output. Be sure to separate these drive periods by a period where you are not diving the output to show that the output goes to high-impedance.
* **Synthesize the design using Quartis**

In your report be sure to show the circuit synthesized by Quartis ala the sample report.

Submit it to the dropbox MB Comp 9.