- I used the HDL programming in the Nand Tetris hardware simulator to implement this 16-bit register.
- This is created by forming arrays of 16 single-bit registers.
- Then connecting them together to form the 16-bit register.
- The 1-bit register has a Mux and DFF components.
- The chip interface consists of an input pin which carries a data bit, a load. bit which enables the cell for writes, and an output pin which emits the current state of the cell.
- This forms a single bit register.
- Then in the 16-bit register HDL file, I had to write 16 arrays of 1-bit registers and connect them with one another to implement the 16-bit register completely.
- The connection between the in [0] and out [0] bits is established using bus syntax, and this connection process is repeated up to the 16th bit. In other words, the input bit in [0] is linked to the output bit out [0] via bus syntax, and this connection is continued sequentially up to the 16th bit
- Then loaded the 16-bit register HDL file and the test file in Hardware simulator and ran it.
- The comparison ended successfully, showing that we created a 16-bit register successfully.