**8. Store multiple 8-bit data in BRAM (using Xilinx ip) & then add them serially using a single 8-bit adder and display the result without truncation.**

* As mentioned in question, I configured block memory generator IP for 8-bit write and read width and 16 write and read depth.
* I used a basic single-port RAM with native interface for simplicity.
* To add the data, we can use any adder like, ripple carry adder, recursive doubling based adder.
* I used adder/ subtractor IP for ease

**TEST STIMULUS**

* I wrote 1,2,3,4 and 5 to Bram and then added them
* we can see the final sum as 1+2+3+4+5 = 15 (0f)
* I used one inputs as 8-bit, other input and output as 9-bit to avoid truncation.
* I gave the output sum to the 9-bit input port and data\_out from Bram to 8-bit port for addition.