

## **Experiment #2**

**Aim: Operations on fixed, dynamic and queues.**

### **1. Write the System Verilog code to:**

- i. Declare two bit-type fixed-size array of size 10 which can store 8bits values. Initialize first array with values {2,4,6,8,10,12,14,16,18,20} and second array with values {1,3,5,7,9,11,13,15,17,29}.
- ii. Display the values stored in two array declared in step-i.
- iii. Copy the contents of first array into second array and compare two arrays and display the result of comparison.

### **2. Write the SystemVerilog code for the following requirements.**

- i. Declare the two integer type dynamic array.
- ii. Store the following values in the first dynamic array-{ 3,6,9,12,15,18} and {2,4,6,8,10,12,14} in the second dynamic array.
- iii. Print the sum of the elements stored in the arrays.
- iv. Insert the contents of the first array into second array (after its last element).
- v. Delete the first array and try to print the contents of the first and second array. Write remark if you have any observation.

### **3. Write the SystemVerilog code for the following requirements.**

- i. Declare the two Queues Queue\_1 and Queue\_2. Initialize the first queue with values {3,4,5,6} and second queue with values {10,11,12,13}.
- ii. Insert 10 before 4 in queue\_1 and display the contents.
- iii. Insert Queue\_2 in Queue\_1 after the index value 3. Display the contents of the Queue\_1.
- iv. Delete value 3 from the first queue. Display the contents of the Queue\_1.
- v. Insert value 20 at the front of Queue\_1. Display the contents of the Queue\_1.
- vi. Pop the last element of the Queue \_1. Display the contents of the Queue\_1.
- vii. Insert value 30 at the back of Queue\_1. Display the contents of the Queue\_1.
- viii. Pop the front element of the Queue \_1. Display the contents of the Queue\_1.