JULY DV

1. Randomize the below variables: (8M)

   ```
   class randvar;
       rand bit[7:0] var1, var2, var3, var4;
   endclass
   ```

   i) Randomize all variables.
   ii) Randomize only var2.
   iii) Randomize var1 & var4.
   iv) Randomize var1, var3 and var4.
2. Declare a Dynamic Array in which we can store values of int data type which we call it as Virtual address. (12M)

   i) Allocate 20 memory location for the dynamic array and initialize each location with some random address where address value should be less than 16 MB.

   ii) Find the size of array, delete all the 20 addresses after deleting store the deleted address in a local variable prints the entire array after every delete operation. After every delete is done again regenerate the same array with the previous values.
3. Explain about SV full architecture with a neat diagram, give an example code for a adder using every component in SV testbench. (10M)