Question 7:

This question wanted us to compare any 3 containers. I chose array, vector, and linked list. I displayed an example of each to shoe the difference in code. Vectors and arrays may seem similar, however they both have their pros and cons. Vectors are sequential containers while arrays are indexes. Also, arrays cannot be resized, but you can add and take away variables in a vector. Vector’s also take up more space than arrays. Linked list, vectors, and arrays may seem common. However, arrays and vectors use a dynamic array to store values, while linked list use doubly linked list.

Question 8:

This question wanted us to use a random array have pick values from it to add up to a certain value. I had some variables such as the array size be chosen by the person running the program. I also made the array random by using the “rand” function. I used 2 “for” loops to determine which values in the array will add up to the chosen value. I had the program display each set of values in the array that add up to the total sum.

Question 9:

This was the trickiest question. At first, I tried to make a vector of a random size. However, I couldn’t figure out how to determine whether a sequence in that number would be a De Bruijn sequence. I decided to have a predefined vector size but keep the vector random. Afterwards, I created a loop so each possibility in the vector can be used and compared them to all the possibly De Bruijn sequences. The program will count how many sequences were found and display each one.