

## Exercise 4

### Vectors: Counting Frequency

#### Introduction:

The `vector` class in C++ is another alternative to implement a list. A variable that is declared from a `vector` class (note: you must include `<vector>` library) is called the vector object. The `vector` has the flexibility over arrays since it can grow and shrink in size during runtime.

`vector<int> genRandVectorItems (vector<int> a)` return the generated a set of positive integers that is  $0 \leq x \leq 100$ . The size of the vector is according to your preference.

`vector<int> vectorFreqList (vector<int> a)` returns how many times a particular number appears in the list. The numbers must in increasing order and the format for the vector is number, frequency count.

`void dispFreqList (vector <int> a)` – display the vector with the frequency list.

#### Output:

```
55 80 78 92 95 55 78 53 92 65 78 95 85 92 85 95 95
```

```
53 1
55 2
65 1
78 3
80 1
85 2
92 3
95 4
```