**Randomisation and Python Lists**

**Random Module:**

Python uses Mersenne Twister (math behind) random – Technique for pseudo random number generation.

**import random**

random.randint(a,b) – generates random number between a and b inclusive.

Module: Sometimes, when the code gets too long & becomes difficult to understand, it is split up into different modules where each module is responsible for different bits of functionality.

Creating a module: Create a python file in that location, where you are. Write your module (e.g. pi = 3.1415); import this module.

Say, import my\_module

Print(my\_module.pi) – gives 3.1415

This is how random module works as well.

Generating float random numbers:

Random\_float = random.random() -- generates random number between [0, 1)

The range can be expanded by multiplying it with greater numbers.

**Understanding the offset and appending items to lists:**

List is a data structure ( a way of organizing and storing data)

e.g.

fruits = [item1, item3]

The order of the elements is determined by the order in which the elements are stored in the list.

Offset (index) begins with 0.

To count from last end, offset begins with -1

Add a single item to the end of the list: fruits.append(item4)

.extend() – add a whole bunch of items to the end of the list.

If we split a string, then the string is divided and the items are stored in a list.

To take a random number from a sequence, we use random.choice(seq)

**IndexErrors and Working with nested lists:**

Example of Nested lists:

students = [girls, boys]

girls = [“Sikha”, “Chandani”, “Nilofar”]

boys = [“Battula”, “Uday”, “Tanveer”]