**SECTION 66 GROUP 3**

**PROJECT**

Write a program to implement the Airport operations, in managing the flight takeoff and landing. Maintain separate lists for the airplanes waiting to land and the airplanes waiting take off.

Suppose that

* the airport has one runway
* each airplane takes ‘TimetoLand’ minutes to land
* ‘TimetoTakeoff’ minutes to take off
* on the average, ‘TimetoTakeoff’ planes take off and ‘TimetoLand’ planes land each hour.
* the planes arrive at random instants of time.
* the landing planes are given priority over takeoff planes.

Assume a simulated clock that advances in one-minute intervals. For each minute, generate two random numbers:

If the first in less than TimetoLand/60, a "landing arrival" has occurred and is added to the landing list, and if the second is less than TimetoTakeoff /60, a "takeoff arrival" has occurred and is added to the takeoff list.

Check whether the runway is free. If it is, first check whether the landing planes list is nonempty, and if so, allow the first plane to land; otherwise, consider the takeoff plane list.

Write a program that can simulate the scenario given , using appropriate Data Structures.