1. Given an infinite stream of integers where we are allowed to query on the stream at any instance. Give an efficient algorithm to find the oldest unique integer in the stream.
2. Given a dictionary of URLs that are known to be spam. Whenever users browses a URL, warn the user about the URL he/she requested with its authenticity(whether it is a spam or not).
3. Code a Bowling Alley game with any number of players where each game is of 10 set with 2 rolls each. There will be bonus points for Strike and Spare. If there is a strike/spare in the last turn an extra roll is given to the player.
4. Find the pivot element(s) in an unsorted array where pivot is an element whose left elements are smaller and right elements are greater or equal.
5. Given a set of intervals(can be overlapping or non-overlapping) find the points that are present in maximum intervals.
6. Given an array of length n, write a function that picks n random numbers that are present in the array uniformly randomly.