Faculty of Computer Science, IBA

Circular Linked List

Objective

The objective of this lab is to understand Circular Linked list.

Task

Create a circular link list to solve the Josephus problem. Among various variations of Josephus problem here you have to build a musical object passing game. Do the following to build this game:

1. Insert players in a circular linked list.
2. Play music and pass object among player for a while and then stop.
3. Delete the player with object when music stops.

Repeat the steps 2 and 3 till one player is left and this player will be the winner of this game.

Hint: To perform steps 2, Move the pointer in the list by selecting a counter R. To keep this game unbiased use random number rather than static count.

```
class node {
String name;
node next;
//constructor
}

Public class Game{
   node head;
  Public void insert(String player) { code here }

  Public  String  playGame(){

      while(head.next!=head){

          // R=generate random number

          //move pointer in list R time

          // delete node where pointer stop

      }

        return head.data;  // winner

  }

  Public void delete(node prev, node temp){ code here }

  Public String toString(){ code here    }

}
```