SSN COLLEGE OF ENGINEERING, KALAVAKKAM

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CS6413 - OPERATING SYSTEM LAB

Lab Exercise 9 Deadlock Detection Algorithm

Aim:

To develop a C program to detection the deadlock in the single instance resource allocation graph.

Procedure:

1. Get the number of resources ‘m’ available in the system.
2. Get the number of process ‘n’ available in the system.
3. Create a nxm adjacency matrix or adjacency list.
4. Write the menu 1. Request 2. Release 3. Deadlock Detection 4. Resource allocation graph 5. Wait for graph 6. Exit
5. On request get the process id and resource id. If the resource is free then assign it else mark it as a request edge.
6. On release , get the process id and resource id. Free the resource from that process.
7. On deadlock detection, run the cycle detection algorithm on graph and identify whether cycle exists or not. If cycle exits then deadlock occurs and if no cycle then no deadlock. Print the processes involved in deadlock.
8. Print the resource allocation graph.
9. Print the wait for graph from resource allocation graph.