



Birla Institute of Technology & Science, Pilani

Pilani Campus

II SEMESTER 2021-2022

LAB-1 EXERCISE

Course No.: IS F462

Course Title: Network Programming

Deadline: As per Canvas

Maximum Marks: 20M

Let us consider N children to be created by a process in the topology of a binary tree such a way that there are two children at each level except for the last level. N, A, S are taken as command line arguments.

- Any process can send a signal to anyone. A child knows its pid and parents pid. It derives a range of pids such that $\text{parent_pid} - N \leq \text{pid} \leq \text{own_pid} + N$. It sends signals to each process in that range.
- When a process receives a signal from parent it adds A points, if from a child it deducts S from its points and if from a sibling it deducts by $S/2$. Initially every process starts with N points. When the number of points reaches zero, the process exits. Process prints the signals received, from where and the points and exit message.

Files Expected: A tar file <idno>_lab1.tar containing signal_tree.c and makefile to compile your program.

Upload in Canvas