

**Indian Institute of Technology Roorkee**  
**Department of Computer Science and Engineering**  
**CSN-361: Computer Networks Laboratory (Autumn 2019-2020)**

**Lab Assignment-8 (L8)**

**Date: September 26, 2019**

**Duration: 2 Weeks**

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**General Instructions:**

1. Every Lab Assignment will be performed by the students individually. No group formation is required, and the evaluations will be done every week for the students individually.
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**Submission and Evaluation Instructions:**

1. **Submit your** zipped folder (<filename>.zip or <filename>.tar.gz) through your account in Moodle through the submission link for this Lab Assignment in Moodle course site: <https://moodle.iitr.ac.in/course/view.php?id=47>
  2. **Hard deadline for Final submission in Moodle: October 10, 2019 (9:00 am Indian Time).** For any submission after Final Deadline, 20% marks will be deducted (irrespective of it is delayed by a few seconds or a few days). The key to success is starting early. You can always take a break, if you finish early.
  3. The submitted zipped folder (<filename>.zip or <filename>.tar.gz) must contain the following:
    - (a) The source code files in a folder.
    - (b) A report file (<filename>.DOC or <filename>.PDF) should contain the details like:
      - i. Title page with details of the student
      - ii. Problem statements
      - iii. Algorithms and data structures used in the implementation
      - iv. Snapshots of running the codes for each of the problems
  4. The submission by each student will be checked with others' submission to identify any copy case (using such detection software). If we detect that the code submitted by a student is a copy (partially or fully) of other's code, then the total marks obtained by one student will be divided by the total number of students sharing the same code.
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**Instructions for L8:**

1. Objective of this Lab Assignment is to make the students familiar with the hardware and software aspects of computer networking.
  2. The student will have to demonstrate and explain the coding done for this Lab Assignment in the next laboratory class to be held on **October 10, 2019** for evaluation.
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**Problem Statement 1:**

Use CISCO packet tracer to create a network topology as shown in Fig. 1, and configure the network with Open Shortest Path First (OSPF) protocol.

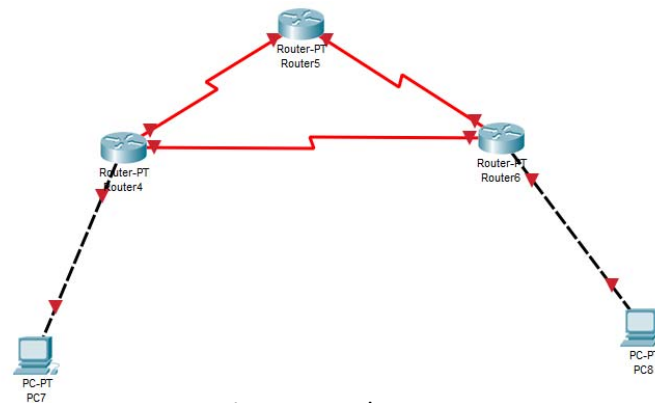


Fig. 1: Topology1

**Problem Statement 2:**

Use CISCO packet tracer to demonstrate Address Resolution Protocol (ARP) in a ring topology as shown in Fig. 2

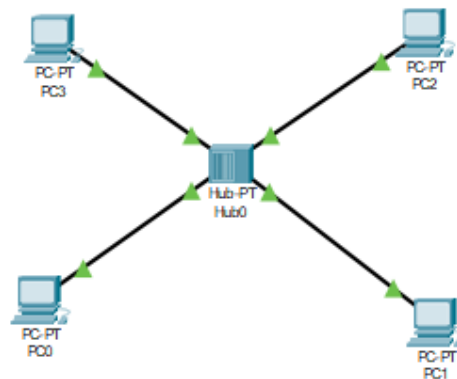


Fig. 2: Ring Topology