**Report - 3**

**Ethernet and Wi-Fi**

**Overview**

* This is an individual report.
* In this report, you shall investigate state-of-the-art Ethernet and Wi-Fi, including:
  + the standard or standards that support the new systems,
  + the main features and techniques on the physical layer, and
  + the main features and techniques on the MAC sub-layer.
* The outline (and some requirements) of the report is listed below.

**Content**

* Cover page
  + Logo of UPRM, Title, Course, Student Name, Student ID, Department
* Table of content
* Section 1: Introduction
* Section 2: The basics
  + The history of Ethernet
  + The history of Wi-Fi
* Section 3: 10 Gigabit Ethernet
  + Standard
  + The physical layer
  + The MAC sub-layer
* Section 4: 100 Gigabit Ethernet
  + Standard
  + The physical layer
  + The MAC sub-layer
* Section 5: Terabit Ethernet
  + Standard
  + The physical layer
  + The MAC sub-layer
* Section 6: Wi-Fi 5
  + Standard
  + The physical layer
  + The MAC sub-layer
* Section 7: Wi-Fi 6
  + Standard
  + The physical layer
  + The MAC sub-layer
* Section 8: Wi-Fi Mesh Mode
  + Standard
  + The main MAC-based networking schemes
  + Given 2 Wi-Fi routers, explain how to set up a Mesh mode to extend the Wi-Fi coverage in your home.
* Section 9: Conclusions
* References
  + **Need at least 20 references (IEEE style)**