**Project 4 – Network Performance Measurement**

**Project Overview**

* This project is an individual project.
* In this project, you will need to use two software: iperf and jperf.
* You shall record and upload a youtube video for walkthrough.
* You shall submit a project report in ecourse.

**Required Steps**

1. Download the latest version of iperf
   1. Search the internet and find tutorials about how to use iperf
2. Download the latest version of jperf
   1. Search the internet and find tutorials about how to use jperf
3. In your own computer,
   1. Open one command line interface, then set up an iperf server
   2. Open another command line interfact, then run an iperf client using server IP: 127.0.0.1
   3. Record all the performance results (bandwidth etc.).
4. Repeat (3) but set up the experiment using UDP (hint: the default protocol is TCP).
5. Repeat (3) and (4) using jperf.
6. Open page: <https://iperf.cc/>, you will find a list of public iperf servers.
   1. Use iperf or jperf to test the network performance from your PC to one of the public iperf server.
   2. Since many people are accessing these servers, you may try different servers with different ports.
7. Record a video using OBS studio to walk through steps (3)-(6).
   1. Upload your video to youtube and set it to private.
   2. Share the video to me at Kejie.lu@upr.edu.

**Content in the report**

* Cover page with the following information
  + Logo of UPRM
  + Title
  + Course
  + Names
  + Student ID
  + Name of Professor
  + Department
* Table of content
* Section 1: Introduction
  + Overview of the project
  + Link to youtube video.
  + Outline of the rest of this report
* Section 2: Basics of iperf and jperf
  + History, latest version, etc.
  + Where to download?
  + How to execute?
* Section 3: Experiments using your own PC
  + Details in step (3)-(5), such as the actual command with all options
  + Network performance results such as throughput and delay
* Section 4: Experiments to test a remote server
  + Details in step (6), such as the actual command with remote server, port, etc.
  + Network performance results such as throughput and delay
* Section 5: Conclusions
* References
  + Need **at least 10 references** for software used, standards, tutorial webpages, tutorial videos, research papers, etc.