

# CS3640 Written Assignment-3

---

Due: Apr 9, 2021 midnight  
Submit as a single PDF on ICON

The first three questions are based on Prof. Henning Schulzrinne's guest lecture on 4/1/2021. If you need a refresher, please check the course website for slides and video.

## **Q1. Identifying the digital divide**

**25 points**

Define digital divide (using your own words). Explain the three main factors that contribute to the said digital divide. Give an example, one for each factor, which demonstrate how they could inhibit individuals from attaining Internet connectivity (this could be anecdotal or references to media articles or published research).

## **Q2. Digital divide and technology**

**25 points**

What did the presenter mean by "accidental broadband"? Is it possible to leverage the already existing near-universal connectivity of electrical grid and telephone networks to deliver Internet connectivity to all? Justify your answer.

## **Q3. Digital divide and technology**

**25 points**

Describe, using technical arguments, why achieving universal Internet connectivity requires a mix of networking technologies? Compare the benefits and shortcomings of five access technologies namely, cable, DSL, fiber, cellular, and satellite in terms of transmission rate, network capacity, coverage area, and cost. (*PS: we have covered some of this in lecture-2*).

## **Q4. April fools' day RFCs**

**25 points**

We know that RFCs define Internet protocols, techniques, behaviors, and sometimes, even people! This is your chance to explore their funny side with April fools' day RFCs ([https://en.wikipedia.org/wiki/April\\_Fools%27\\_Day\\_Request\\_for\\_Comments](https://en.wikipedia.org/wiki/April_Fools%27_Day_Request_for_Comments)). While you are free to read as many (or as few) of these as you like, this question requires you to pick one and summarize its content in ~250 words. *Please remember that copying verbatim will earn you zero points.*

---