Problem I [16 Points]

As discussed in class, as a new venture, you have limited resources; hence, focusing those resources is essential. As a way to focus your resources, you can strategically select one market segment from your market segmentation analysis to be the first market (or what is referred to as beachhead market) your venture will focus on to achieve initial business success. In this problem, you will learn about the early beachhead markets selected by some today’s successful tech companies.

A. What was the beachhead market of Facebook?
B. What was the beachhead market of Pinterest?
C. What was the beachhead market of desktop computers in businesses?
D. What was the beachhead market for the first cell phones?

Problem II [14 Points]

In 2001, Apple launched its iconic iPod brand of portable media player. The device works in conjunction with iTunes software that enables users to transfer music and other content from the iPod to a computer. The software also provides a seamless connection to Apple’s online store so users can purchase and download content.

This potent combination of device, software, and online store quickly disrupted the music industry and gave Apple a dominant market position. Yet, Apple was not the first company to bring a portable media player to market. Competitors such as Diamond Multimedia, with its Rio brand of portable media players, were successful until they were outpaced by Apple.

How did Apple achieve such dominance? Explain.

Problem III [20 Points]

The "parking meter" business model is also referred to as the "penalty charges" model. This is the same model used by credit card companies and (for a while) by Blockbuster upon which they charge late fees. The problem that Blockbuster discovered is that loyal customers can become alienated by such late fees. As such, when Netflix emerged with the tagline "no late fees," Blockbuster lost significant market share and never recovered.

A. What lessons can you draw out of approaches adopted by Blockbuster and Netflix for capturing values out of their services/products?
B. Why would late fees impact Blockbuster dramatically but not credit card companies? Explain (hint: think about the Glasser’s choice theory)
Problem IV [50 Points]

Assume a new cloud computing company named *ML4ALL* starting in Qatar and offering elastic machine learning (EML) as a service. In particular, a user can pay a $10 yearly subscription fee and provision at any time an EML instance to run any machine learning algorithm (provided by EML) for a given dataset. *ML4ALL* charges an hourly service fee of $2 for using EML.

A. From among the business models we discussed in class, which one(s) does *ML4Qatar* use? Explain the pros and cons of this business model (e.g., in terms of predictability, flexibility, recurring revenue stream, etc.).

B. Develop a mathematical model that captures the business model of *ML4ALL*.

C. Use your developed mathematical model to compute the TAM of *ML4ALL* in Qatar, assuming that a maximum of 500,000 users can use its EML service in the first year, each for an average of 100 hours.

D. Conduct a sensitivity study via varying only the market share over a range of 5%, 10%, and 15% that *ML4ALL* can own in Qatar at its first year. Report your results in a table or plots.

E. Assume that *ML4ALL* can grow its market share every year by 2%, starting from a market share of 1% in the first year. Conduct revenue projections for the first 5 years of *ML4ALL* in Qatar.