**Assignment 3: Case Study (Uncertainty and Simulation)**

BUAD 5032 – Fall 2021

1. **Objective:**

The purpose of this assignment is to apply what you have learned so far in this course. Mainly, you will be using decisions trees, expected values, and simulation to provide a recommendation.

1. **What You Will Need**

Access to a computer with R and RStudio.

Rmarkdown

HBR case <https://hbsp.harvard.edu/import/875831>

1. **What You Will Hand In**

Submit a Rmarkdown file and the knitted version (knitted to word or pdf) that includes your code and narrative of your solution (Assignment3Group#.Rmd/doc/pdf) via Blackboard - Assignment 3. This document should be no longer that 3 pages (including code).

1. **Due Date**

11/22/2021 at 11:59PM EST.

1. **Note on Collaboration**

This is a *Category B* assignment. Specifically, your group may not receive help from anyone outside your group. All questions concerning this assignment should be addressed to your professor. It is an honor code offense to give help to other groups and individuals or receive assistance from other groups and individuals

1. **General Instructions**

* Start by creating a section named *Summary*. In it, you should have a brief statement explaining the business problem, your approach, and a recommendation of what Appshop should do. This should not exceed five

sentences.

* Create a section called *Analysis*. Start the section with a paragraph explaining the approach that you are going to take to solve the problem. List and explain the three alternatives available. Now, create subsections (one for each of the available options) where you calculate the valuation for each of the options. Make sure to include your code and results. Explain in words how your team obtained the payoffs.
* Create a section called *Illustration*. Include the decision tree in this section. The decision tree does not have to be created in R. You can include images in your knitted document.
* Create a section called *Conclusion*. Restate your recommendation and any potential pitfalls in your analysis. Discuss the risks taken by the company within the business context.