Application Engineering & Development – Spring 2020

Due Date: Feb 28, 2020 at 11:59 PM

The objective of this assignment is to instill in you the techniques for turning an object model into a machine for information gathering and data aggregation. We want to use software engineering techniques to improve the quality of education anywhere and hold people accountable for improving the quality of life through education, learning to learn, and feedback.

Your task to study ways to create a performance measurement solution to enable universities to measure the quality of the education they deliver to their students. The approach will be to look into how an educational system in terms of faculty and courses contribute to the growth of their graduates over a 5-year period. You must figure out ways to track the jobs and promotions graduates get over time and assign rankings accordingly. In addition, track the connection of courses and their relevance to graduates growth. Also, study the relationship between GPAs and industrial success (In other words, do grades matter?) Also, discuss how to apply your digital ideas and solutions to k-to-12 educational systems in the developing countries.

One of your deliverables will be to design a dashboard that enables college and university administrators to compare the performance of their academic units.

One important question, is to define your own ranking system of educational institutions especially for the developing world.

Deliverables

- 1. Report outlining your proposed solution.
- 2. Sequence diagrams showing how to navigate the university object model to deliver performance metrics needed for performance and feedback.
- 3. An object model showing the changes to the **university model** to support the new capabilities. This must include the additional methods and attributes required to deliver the results.

Your application must enable the creation and update functions for any of the attributes of concern. It will be okay to assume each of these questions are buttons on the left/right side of the screen depending on your design.

Note

There is no need for java implementations, just a report with the specifications of how to implement such a solution.

Grading Criteria:

Report = 30% Sequence Diagram (UML)=40% Object Model (UML)=30% Late =-10