To: Dr. Stanley
From: Devin Moore
Subject: Software Development Process Recommendation
Date: September 10, 2014

As I am sure you know, current practices for software development call primarily for one of two processes: waterfall or agile models. I have taken some time to research both models to be sure I understand the strengths and weaknesses of each. I'd like to share my findings with you.

The waterfall model has been the development model of choice since the beginning of software engineering. It focuses on eight phases: conception, initiation, analysis, design, construction, testing, production, and maintenance. These phases are completed in a sequential manner, perhaps emulating a waterfall. If we were to implement this method, I believe we would find advantages in building a concrete, all-inclusive plan that we can follow closely. It would require fewer conversations and allow us to focus on our work, once the requirements and planning has been completed. Its disadvantages will be explained, however, in the next paragraph.

Agile methodologies have been growing in popularity in recent years. This development model can be thought of as adaptive, evolutionary, responsive, and customer focused. Allow me to explain—agile methods call for projects to be broken up into smaller segments. Each segment follows a four-step process of gathering requirements, designing, coding, and testing, and will result in working software. Once one segment is completed, planning may begin for the next. This planning stage allows for interactions with the customer and makes it possible to change the direction of the project to more closely align with the customer's requirements. Upon completion of the last segment, the project will be complete and the working software will be ready for use.

My recommendation cannot be overemphasized. Our class must choose to implement agile methodologies. This method places the customer and their requirements at the center of the development process—this is exactly as it ought to be. These processes will allow us to focus on customer interaction, working software throughout the process, and responses to change. We must be sure we remain focused on what matters most: delivering the right product, on time, and on budget. I am certain the agile processes will bring these results.