**COSC 419 Test 3 (Final Exam)**

**Maximum is 100**

**Please submit your answers on this question paper and make sure the filename has your first name as well.**

1. **Agile Software Engineering Question**: (20 points) you have just joined a software development team as a senior developer (**Not a manager**). You will be working with a team of 5 software developers who cannot seem to be able to complete and integrate their codes in a consistent manner. They have gone through the requirements analysis with a reasonable architecture framework and design. They have established a GitHub repository for their project codes for version control. Nonetheless, consistently they tend to spend a ton of time in pointing finger blaming each other, assimilating their codes in the last minutes, and consistently breaking their supposedly final builds. What could be their problems? List at least five possible problems. (5 marks) What can you do to fix these problems? ( 10 marks). Assume, you team mates listen to you advice, how would you know your approach is working and improving? (5 marks) (hint: no need to explain too much in detail, just identify the key activities that are missing. For example: No baseline build – you cannot use this one for your answer)

* In order for the software development process to be good there are many factors that come in play. As for myself, I participated in capstone project this summer and was also faced with many difficulties. During the first couple phases of the project, I realized it is incredibly crucial for teams to come up with solid documentation and set up and certain guidelines they need to follow. It seems like they only set up GitHub repository for the project codes for version control but did not do anything else to organize their codes or proper set up guidelines to what they are going to follow. Personally, I feel like, in order to fix “pointing finger blaming each other for breaking final builds.” They need to set up certain roles in the beginning to each group members. For example, in a group of 4-5. One needs to be the project manager and that person has to deal with managing the project and its team members’ time managements, conflicts, and etc. And, if there is an integration lead, that person needs to make sure technical part of project is working fine without breaking, and no one else should do it. Obviously, they have more than 5 possible problems. When project does not go well, there are usually more than that. As I have explained in above answer,
  + They should’ve assigned roles for each member.
  + Time management tool like Toggl to avoid feature creep.
  + Proper documentation. (Scope & Charter / Design Documentation)
  + Software development tools like Trello.
  + Proper use of linter so codes do not break.
  + Team member conflicts way before the final builds.

It is indeed difficult for project to be successful. Different people have different styles of managing their work and codes. Figuring out these and making sure your team member come up with one style of coding and solution in the beginning of the project is very crucial.