Part 1: Software Development Lifecycle & SCRUM

As a student intern at Touchstone Institute, I would approach my responsibilities on a SCRUM based development team with a collaborative and learning oriented mindset. I understand the importance of Agile Methodologies in delivering timely and user focused solutions, especially in high impact environments like healthcare. Through my technical background and experience working in iterative development cycles, I would contribute effectively to the redesign of the PRO Portal's automatic flagging system.

In SCRUM, each role has distinct responsibilities. The Scrum Master facilitates the team's progress, addresses obstacles to productivity, and ensures SCRUM principles are followed. The Product Owner represents the stakeholder voice, prioritizes the product backlog, and defines the acceptance criteria. As a Developer, my role would be to contribute to the implementation of features, bug fixes, and iterative improvements that align with the product backlog and sprint goals. I would be responsible for understanding the flagging logic, improving backend rule processing and refining the user interface.

I would actively participate in core SCRUM ceremonies. During Daily Stand Ups, I would communicate what I completed (e.g., revising flag thresholds), what I plan to do (e.g., testing override logic), and any impediments I am facing (e.g., logic conflicts or data gaps). In Sprint Planning, I would work with the team to break down tasks related to flag rule redesign, portal UI adjustments, and integration testing. I would also help estimate story points based on task complexity. During Sprint Reviews, I would present completed functionality, such as the updated flag display table or new candidate evaluation rules, and gather feedback from stakeholders. Finally, in Sprint Retrospectives, I would reflect on what processes worked well, such as backend testing strategies or UI iteration cycles, and suggest improvements for future sprints.

To approach the redesign of the PRO Portal's automatic flagging system, I would follow the six phases of the Software Development Lifecycle to ensure a structured and maintainable solution. In the Requirements phase, I would collaborate with both the PRO and IT teams to gather current system behaviour, identify recurring false positives or missed flags, and interview reviewers to understand workflow inconvenience points. I would also review historical application data to uncover common input errors or misinterpretations.

During the Design phase, I would propose a modular and rule driven evaluation system. Each flag would be represented as a configurable object, allowing changes without modifying core logic. I would also create UI wireframes using PrimeNG components to display flagged issues clearly, with severity tags and reviewer override checkboxes. These design considerations would prioritize clarity, accessibility, and reviewer efficiency.

In the Implementation phase, I would develop updated flagging logic using TypeScript and Node.js, ensuring that each eligibility rule is modular, reusable, and easy to maintain. On the frontend, I would modernize the user interface using AngularJS and PrimeNG, incorporating responsive components like dropdowns, tag indicators, and validation messages to improve usability. I would implement RESTful endpoints to handle candidate submissions and ensure that form inputs dynamically trigger backend

validation and flag evaluation in real-time. The features engineered in this phase would be built with user experience in mind, prioritizing clarity, accessibility, and reviewer efficiency.

In the Testing phase, I would design test cases to validate each flag rule under a variety of input scenarios, including edge cases like missing fields or conflicting answers. I would help test both backend logic and frontend behaviour to ensure that flags are displayed correctly and that usability meets reviewer expectations. I would also support User Acceptance Testing by collecting feedback from the PRO team and refining features based on their input.

In the Deployment phase, I would assist in pushing changes to a staging environment, preparing deployment documentation and helping train internal users. I would ensure the release is timed to minimize disruptions and that rollback options are documented. Additionally, I would help draft release notes and a change log to communicate updates clearly across teams, and participate in final validation testing to confirm working functionality before official release.

Finally, in the Maintenance phase, I would document the logic behind each rule, create onboarding notes for future developers, and recommend building an admin interface to allow rule updates without code changes. I would also help define a simple support workflow for reporting and resolving future issues. This would support long-term sustainability, empower non-technical users to manage updates, and reduce IT overhead.

By applying SCRUM principles and the Software Development Lifecycle methodically, I would ensure the PRO Portal's flagging system is not only more accurate and efficient but also maintainable and user friendly for the long term. As a student intern, I am eager to contribute my skills to this meaningful modernization effort and grow through collaboration with the experienced professionals at Touchstone Institute.