**PMO QA Engineer – Assignment**

**INSTRUCTIONS:**

**Answer all questions. Expand the sections accordingly to insert your answers. Once completed, please upload to GitHub and share the link.**

1. In your view, what are the primary objectives of a PMO?

Ans: To ensure that a proper governance and project framework is applied to all projects being executed in the department.   
To monitor the overall health of projects and ensure that all projects are tracked and controlled as per budget and timelines provided and ensure that all risks that have been raised have relevant mitigation and action plans to resolve them.

1. Explain software development using AGILE methodology. How is AGILE different from Waterfall?

Ans: Utilizing Agile methodologies ensures there is continuous improvement and iterations in the software development life cycle. It ensures that the end user has more frequent access to working software during the project and can provide relevant feedback rather than waiting for the complete QA/QC phase to finish before they can review. Agile also helps you adapt to the situation and be flexible.   
  
In Waterfall methodology, one phase must complete before moving on to the next and the requirements must be firmed before proceeding to development, this is a major difference between waterfall and agile as agile allows the customer flexibility.

1. Describe your understanding of open-source software and share some examples.

Ans: Open-source software provides users with the flexibility to amend and distribute the source code in ways they see fit to suit their own purposes. Many software development projects use open-source tools for their projects such as PHP, Python.

1. Software testing is an important element in software development journey. Why and when is software testing executed?

Ans: Software testing comes in after the build or development stage has been completed. Before submitting the final product to the customer, the developed software must undergo rigorous quality assurance and testing to ensure that all modules/functions are working as per the requirements agreed upon with the end user and that there are no bugs in using the system.   
  
Once the software has passed all the test scenarios listed, it is ready to release for deployment or for testing by the end user prior to deployment.

1. Choose **ONE** and provide your answer,  
   1. Explain test plan and test strategy difference.   
      What fields do you need to define before you start writing test cases? (ex. Test Case ID)

Ans: Test strategy is centered towards how the relevant testing will be executed, while test plan is the document listing the scope of the testing to be performed and what parameters will be covered.   
  
The most important fields for test cases will be

1. Test Case ID
2. System (i.e Platform testing on)
3. Test Case type (positive/negative testing)
4. Test Case description
5. Expected Result
6. Actual Result (upon testing)
7. Status (Pass/Fail)  
     
   1. Please write the test cases for the below application  
      

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Case ID | Functionality | Expected Outcome (Steps to Reproduce) | Actual Outcome | Status (Pass/Fail) |
| 001 | Register Badge - Valid | * Key in information required with valid parameters – (i.e Name – text only, no number, Zip code – valid zip code length) * Select Terms & conditions checkbox * Click ‘Register Badge’   System will successfully register badge |  |  |
| 002 | Register Badge – Invalid | * Key in information required with invalid parameters – (i.e Name – Number, Zip code – invalid zip code length) * Check Terms & conditions checkbox * Click ‘Register Badge’   System prompt error message – to fill in all required information. Unable to proceed |  |  |
| 003 | Register Badge - Invalid | * Key in information required with valid parameters – (i.e Name – text only, no number, Zip code – valid zip code length) * Unselect Terms & conditions checkbox * Click ‘Register Badge’   System prompt error message – ‘Please agree to terms & conditions. Unable to proceed. |  |  |