IS&T Applications

IS&T Software Quality Assurance (QA) Intern

As an intern, you will work directly with the Michael Goodwin the IS&T Asst. Director of QA, who manages the internal software quality assurance group. IS&T Applications is the group that’s responsible for the development or the modification of software applications used by the university. The IS&T QA group is responsible for testing these applications to ensure they are developed and delivered as expected by our customers.

It starts with a general understanding of the SDLC (software development life cycle) and the role that QA plays. As an organization matures, it moves away from just “testing” to ensure quality, to creating an overall quality program designed to build quality into a product (application) under development. Quality Assurance is a continuous improvement process.

A basic understanding of Microsoft Word, Excel and Project are needed. These skills will be enhanced through the internship. Depending on the skills and interest areas of the intern, this experience can center on one or more of the areas listed below.

Potential Responsibilities:

- Project Charter review:
  - Review new project charters for understanding of business goals
  - Determine whether the project is a new application, existing application being modified or vendor supplied application and how it impacts Boston University

- Technical and Non-technical document review and decomposition:
  - Review Business Requirements documentation for understanding of a project’s (application under development) scope and functions needed
  - Decompose Business requirements developing test scenarios based on the business functions (how a requirement will be tested)
  - Review Technical Specifications for understanding a project’s technical needs
  - Decompose Technical specifications to ensure testing complies with the specifications. For example, the specifications may identify certain browsers an application will run in or that the application runs on a mobile device. Testing will include these browsers or devices to ensure thoroughness

- Test approach and plan development:
  - Draft an approach. An approach document is what you’re going to leverage during testing.
  - Draft a test plan. The test plan is the “how” you’re going to test it.

These can be separate documents, but are often one. The planning documents include a number of other items including but not limited to:

1. In scope items
2. Out of scope items
3. Execution plan (timelines, cycles, etc.)
4. Integrated applications
5. Risk management and remediation
6. Defect flow, management and remediation
7. Overall process for testing that will be followed
8. Project sponsors, communication plan and signoff
9. Glossary of terms
10. Raci matrix
11. Metrics
12. Load
13. Performance
14. Security

• Test case development:
  o Identify scenarios for testing based on the requirements
  o Develop test cases in an excel spreadsheet or test execution tool, which are step by step instructions to test a scenario
  o Identify and create positive and negative test cases for each requirement. An example might be a date field:
    ▪ Positive test – date entered in the correct format using numbers and slashes, test should pass
    ▪ Negative test – date entered using alpha characters, test should fail
  o Develop test cases for non-functional requirements
  o Determine priority order for test cases
  o Determine test cycles for test cases, if needed

• Test execution and defect logging/resolution:
  o Execute test cases based on priority/order
  o Track and update test results (pass/fail/no run)
  o Capture and report any defects encountered during testing
  o Regression test any code when defects are remediated
  o Report overall test status (Metrics)
  o Recommend go/no go decision based on test results
  o Post implementation project review
  o Recommendations for improvement in the overall process

Professional Growth and Development:

No matter what area(s) the intern directly supports, he/she can expect to leave the experience with a stronger understanding or ability for the following:

• The process behind software testing and quality assurance and why it’s important
• Project management skills
• Verbal and written communication skills
• Organizational skills
• Familiarity with testing various applications
• Internet research skills (e.g., quality assurance process as it pertains to the SDLC)
• Understanding of CMMI/ITIL
• Attention to detail
• Proficiency in Microsoft Suite Office (Word, Powerpoint, Excel) to support on materials development

How to Apply

Please apply online at http://www.bu.edu/casprograms/programs/internships