



PALLI KARMA-SAHAYAK FOUNDATION (PKSF)

www.pksf.org.bd

Terms of Reference (ToR)

for

Software Test Engineer

1.0 Background

Palli Karma-Sahayak Foundation (PKSF), an apex development organization founded by the Government of Bangladesh, is mandated for poverty alleviation through sustainable employment generation by providing appropriate financing, skill training, and other necessary services. As a second-tier organization, PKSF implements all programs and projects through more than 200 of its Partner Organizations (POs) across the country.

As part of its ongoing efforts to strengthen digital services and improve operational efficiency, PKSF's Information Technology and Digital Solutions Department (ITDSD) is expanding its software development capacity, including its mobile application development capabilities. This requires professionals capable of designing and delivering high-quality, secure, and user-friendly mobile applications that extend PKSF's digital services to its stakeholders, partner organizations, and staff.

This role involves planning, designing, executing, and continuously improving quality assurance and automated testing activities for PKSF's web, mobile, API, and integrated software systems. The incumbent will ensure that applications meet approved functional and non-functional requirements through comprehensive functional, integration, regression, API, performance, security, usability, and end-to-end testing. Given the volume, complexity, and sensitivity of PKSF's data including financial, project, Partner Organization, beneficiary, and institutional records the incumbent will play a critical role in validating data integrity, secure access, authentication and authorization, business rules, workflow accuracy, system reliability, and performance, while identifying and mitigating defects and quality risks throughout the software development and release lifecycle.

2.0 Position Title & Administrative Overview

- **Position Title:** Software Test Engineer
- **Duty Station:** PKSF Bhaban, Dhaka (with occasional field visits as required)
- **Employment Duration:** Initially 4 years (subject to annual renewal based on performance and demonstrated dynamism)
- **Age Limit:** Maximum 32 years on the last date of application
- **Years of Experience:** Candidates shall have a minimum of two (02) years of professional experience in Software Quality Assurance and Testing.
- **Consolidated Monthly Salary:** BDT 1,20,000/- (inclusive of all taxes as per Government rules) plus admissible benefits (annual increments, festival allowances, Bangla Noboborsho allowance, mobile allowance, group insurance) as per PKSF policies.

3.0 Key Responsibilities and Tasks The Software Test Engineer will work under the Information Technology and Digital Solutions Department (ITDSD) of PKSF and will be responsible for the following tasks:

PKSF Bhaban-1, E-4/B, Agargaon Administrative Area, Sher-e-Bangla Nagar, Dhaka-1207, Bangladesh
PABX: +88-02-222218331-33, 222218335-39
+88-02-222218341, 222218343

pksf@pksf.org.bd
facebook.com/pksf.org.bd
youtube.com/@PKSF1990



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A. Test Planning & Strategy Formulation

1. Develop and implement the QA strategy, test plan, testing standards, procedures, and quality assurance framework for PKSF DSS.
2. Review BRD, SRS, SDD, prototypes, business rules, acceptance criteria, and other project documentation to ensure requirements are complete, consistent, testable, and traceable.
3. Prepare and maintain test scenarios, test cases, test data, test scripts, regression suites, and related QA documentation.

B. Test Execution & System Validation

1. Perform functional, system, integration, regression, API, database, workflow, usability, cross-browser, and mobile application testing, as applicable.
2. Validate end-to-end business processes and cross-module workflows across different DSS functional areas.
3. Test Role-Based Access Control (RBAC), workflow, notification, document management, authentication, and other enterprise cross functional services.
4. Conduct API and integration testing and validate data exchange between DSS modules and external systems.
5. Perform database and data validation, including data integrity, transaction consistency, reporting data, and data migration validation.

C. Automation, Performance & Security Testing

1. Plan and execute regression testing and progressively establish automated regression testing.
2. Support performance, load, scalability, and security testing in coordination with relevant technical teams.
3. Perform production smoke testing and post-deployment verification.

D. Quality Assurance, Defect Management & Agile Collaboration

1. Establish and maintain an effective defect management process, including defect identification, classification, tracking, retesting, closure, and reporting.
2. Support User Acceptance Testing (UAT), including preparation of UAT scenarios, test data, test environment validation, defect tracking, and acceptance evidence.
3. Verify compliance with the project's Definition of Done (DoD), quality standards, KPIs, acceptance criteria, and milestone/gate requirements.
4. Conduct pre-release quality assessment and provide evidence-based Go / Conditional Go / No-Go recommendations.
5. Monitor and report quality KPIs, defect trends, test coverage, regression status, and release readiness.
6. Participate in Agile/Scrum ceremonies, sprint planning, backlog refinement, sprint reviews, retrospectives, defect triage, and release planning.
7. Maintain QA documentation and prepare periodic test, defect, quality, and release reports.



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8. Identify quality risks and recommend corrective and preventive actions.
9. Coordinate with PKSF officials, Business Analysts, Developers, Solution Architects, DevOps/Infrastructure, Security, Data Migration, UAT, and other project teams.

Perform any other duties as assigned by the supervisor.

4.0 Academic and Other Qualifications

- i. Candidates must have a Bachelor's degree in Computer Science/Computer Science & Engineering/Information Technology/Software Engineering/Equivalent Degree or any other subject from a reputed university.

or

Candidates with a Bachelor's degree in any other discipline will also be considered provided they possess substantial professional experience in the software quality assurance field.

- ii. Applicants must have at least three First Divisions/Classes or equivalent CGPA in their academic record.
 - a. Any Third Division/Class in any examination is not acceptable.
 - b. First Class will be determined based on the candidate's regular degree (considering the first three degrees only)

5.0 Experience & Required Competencies Mandatory Requirements:

1. **Years of Experience:** Candidates shall have a minimum two (02) years of professional experience in Software Quality Assurance and Testing.
2. **Core Testing Experience:** Candidates must have hands-on professional experience in Quality Assurance and testing of web and mobile applications, including functional, integration, regression, usability, compatibility, performance, and end-to-end testing across different devices, operating system versions, and screen sizes.

Preferred Qualifications & Demonstrated Capabilities:

1. **API & Integration Testing:** Experience using RESTful APIs, JSON/XML data handling, authentication/authorization validation, third-party service integration, and tools such as Postman or equivalent.
2. **Automated Testing:** Frameworks and tools such as Playwright, Selenium, Cypress, Appium, or equivalent, including development and maintenance of reusable automated regression test suites.
3. **Database Proficiency:** Database and data validation, including SQL-based testing, data integrity, transaction validation, data migration testing, and verification of data synchronization across integrated systems.
4. **Performance Testing:** Load, stress, and scalability testing using tools such as Apache JMeter, Gatling, or equivalent, particularly for enterprise applications and API-driven systems.

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5. **Security & Vulnerability:** Authentication, authorization, role-based access control (RBAC), session management, data protection, and identification of common application security vulnerabilities.
6. **CI/CD & DevOps:** CI/CD-based test automation and DevOps practices, including integration of automated testing into pipelines using GitHub Actions, GitLab CI/CD, Jenkins, Azure DevOps, or equivalent tools.
7. **Agile/Scrum Practices:** Participation in sprint planning, backlog refinement, acceptance-criteria review, defect triage, sprint review, release validation, and continuous quality improvement.
8. **QA Tooling:** Experience with test management and defect tracking tools such as Jira, Azure DevOps, TestRail, Zephyr, or equivalent.
9. **Certifications:** Candidates holding relevant professional certifications such as ISTQB Certified Tester, Certified Agile Tester, or equivalent software testing/quality assurance certifications will be given preference.