Software Quality Assurance Plan (SQAP)

Version 0.1.0

Weight Tracker APP

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1. Purpose and Scope

- The purpose of this SQAP is to document the SQA approach that the application development team of KGS.Inc will follow. The SQA activities planned in this document align with our sponsors, stakeholders, and clients, as documented in the Health-R-Us Weight Tracker APP Development Contract (CONOPS). This includes all software developed within the allotted budget as the Health-R-Us Weight Tracker APP Development Contract dictates.
- According to the Health-R-Us Weight Tracker APP Development Contract (CONOPS), KGS.Inc. will develop and maintain the Weight Tracker mobile application software for IOS and Android platforms.

2. Definitions and Acronyms

- SQAP - Software Quality Assurance Plan: The Software Quality Assurance Plan is a document that outlines the necessary processes, procedures, and activities to ensure the quality of software during the development life cycle. It summarizes the responsibilities, standards, and methods for providing the software that meets its specified requirements and performs as expected. The SQAP supports this systematic approach to quality management, guaranteeing that software is being developed and tested and, later on, maintained in conformance with internal and external standards such as the IEEE 730-2014 standard.

- SQA - Software Quality Assurance: Software quality assurance is a well-organized process ensuring the software meets the specified quality standards and requirements. It's a set of activities, including process monitoring, auditing, and testing, carried out during a software development lifecycle, ensuring that software processes and products are reliable, efficient, and adhere to the customer's expectations. SQA focuses on defect prevention by improving development practices and checking conformance to standards, such as IEEE 730-2014. It also allows assurance of the product, which verifies that the final software product is in conformance with its functional and non-functional requirements.

- CONOPS - Concept of Operations: CONOPS refers to a document providing a high-level, general vision of the system or project from the user's perspective. It details how the system will work, its purpose or objectives, its operational scenarios, and its relationship with its users or other systems. The CONOPS document shall define what functionality and performance are intended from the system to help align stakeholder and developer expectations in guiding the system's design, development, and deployment. It is used in software development to communicate how the software product will be used in real-world scenarios.

3. Reference Documents

- Health-R-Us Weight Tracker APP Development Contract (CONOPS)

4. Management

- **3.1 Organization**

- ○ Identify the organizational structure for SQA activities.
- **3.2 Tasks**
  - ○ List all the tasks that SQA will perform.
- **3.3 Responsibilities**
  - ○ Define the responsibilities of the different stakeholders.

5. Documentation

- **4.1 Types of Documentation**
  - ○ Types of documentation that will be generated or used.
- **4.2 Review and Approval**
  - ○ Process for reviewing and approving SQA documentation.

6. Standards, Practices, Conventions, and Metrics

- Define the standards, practices, and metrics guiding the SQA process.

7. Software Reviews

- **6.1 Types of Reviews**
  - ○ Different types of software reviews (e.g., code reviews, design reviews).
- **6.2 Review Procedures**
  - ○ Procedures for conducting software reviews.

8. Tests

- **7.1 Types of Testing**
  - ○ Unit, integration, system, and acceptance testing.
- **7.2 Test Procedures**
  - ○ Detailed test procedures to be followed.

9. Problem Reporting and Corrective Action

- Process for identifying, reporting, and resolving problems and defects in software.

10. Tools, Techniques, and Methodologies

- Description of tools and techniques used for SQA activities.

11. Code Control

- Procedures for managing software code and ensuring proper version control.

12. Media Control

● Methods for controlling physical and electronic media used in the software development process.

13. Supplier Control

● Procedures for ensuring the quality of externally sourced components or software.

14. Records Collection, Maintenance, and Retention

● Procedures for collecting, maintaining, and retaining quality assurance records.

15. Training

● **14.1 Training Plans**
   ○ SQA-related training for staff involved in the project.
● **14.2 Training Procedures**
   ○ Methods for conducting and tracking training.

16. Risk Management

● Define the processes for managing risks in the software quality assurance process.

17. SQA Reporting

● **16.1 Reporting Procedures**
   ○ How SQA activities will be reported to management.
● **16.2 SQA Audits**
   ○ Procedures for conducting SQA audits and ensuring compliance with the SQAP.