**<Sentiment Analysis App>**

**Software Quality Assurance (SQA) Plan**

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# **Purpose**

The purpose of this Software Quality Assurance (SQA) Plan is to establish the quality goals, tools and methodologies required for the project, and list of reviews along with testing required to implement effective quality assurance functions for the <Sentiment Analysis App > project.

The Software Quality Assurance plan provides guidelines to ensure that the product is developed in confront to the requirements, it is carried out on time and is free of errors

# **Quality Goals**

The quality goals for the given project are listed below:

|  |  |
| --- | --- |
| ***QUALITY GOAL*** | ***DESCRIPTION*** |
| Usability | The system is easy to use for the new users |
| Reliable | The system should be able to analyze the content correctly |
| Performance | The system should be able to fulfill request of multiple users at a time. |
| Security | The system shall be secure and stop unauthorized user from using the services |

# **List of Reviews**

## **Software Requirement Review**

After the requirements are gathered from the stakeholders, a meeting will be held to discuss these requirement. In this meeting, all the stakeholders will gather. After everyone is gathered, all the requirements extracted from the stakeholders will be read line by line, page by page to ensure that that the document contains all the requirements of the stakeholders that they want to implement in the system.

## **Managerial Review**

In this review, all the progress done is reviewed. It is done to keep a track on the work status of the product. For Sentiment Analysis Application, the managerial review will be held twice a week to look at the status of the work and discuss if the teams working on the project require any other resources to carry out their task.

## **Technical Reviews**

Technical review is done by a group of specialized personnel to check if the system being developed is on the lines of the requirements gathered and discussed in software requirement review.

It is done to check if the system is in align with its intended purpose and to find out defects early in the process as it would be easy and less costly to tackle them. For our system, technical reviews will be done after completion of each module and after integration of certain modules in order to detect the errors.

After integration of subsystems, a group of senior developers will conduct technical reviews to find out if the system is working properly or does it need some overhauling

## **Post Mortem Review**

Post mortem review will be done at the end of the project. In this review, all the things are written from what went good and what were the failures that the team experienced while working on the project.

All this is done to document the failure which were encountered so that these risks and failures can be controlled in the future.

# **Testing**

Testing is done to ensure that the system is free of errors. The purpose is to find bugs and errors in the system so that they can be handled before the system is deployed in real world environment.

Following are certain tests that needs to be done in order to ensure that the product is free from errors and faults.

## **Unit Testing**

Unit testing is done to validate the smallest testable part of the software (known as unit) along with the testing of logic and data flow involved and the observable behavior of the system.

Unit testing is done to check that the selected unit is working as intended.

## **Integration Testing**

In integration testing, we integrate different units and subsystems and see if that they work together in the intended manner. It is done to see that the components coexist and work in an error free environment.

This testing ensures the application components work together prior to Business Functional Testing.

## **Business Functional Testing**

It is done to ensure that the product developed meets all the specified requirements as gathered and written in Software Requirement Specification document.

## **Browser compatibility testing**

The browser compatibility testing will be done after completion of each module to see if it is working properly on all the browsers as intended. It will also be done after the integration of modules to again check for the working and find out any faults.

# **Problem reporting and corrective actions**

The Project Management Office is responsible for taking action to resolve issues and solve problems identified by the project team. Issues will come from reviews of delivered documentation, the build process, installations, testing and/or usability reviews.

The PMO office then may solve issues themselves or assign them to any individual or team to reach its solution.

# **Tools, Methodologies and Techniques**

The following section describes the tools, techniques and methodologies used to carry out the SQA plan:

**Tools:**

The tools used are as follow:

1. Defects and change request will be handled through bug tracking software like JIRA (used for tracking defects) and change requests will be handled through MS Word.
2. Project Schedules will be handled through JIRA
3. Minutes of Meetings will be recorded in MS WORD

**Methodologies:**

The methodologies used to carry out our tasks are as follow:

1. Project Schedule will be updated on weekly basis to ensure that everyone knows the status of the work done. It will help teams to work accordingly and deliver project on time
2. Source code of each unit will undergo peer view to make sure that it follows the standards.
3. Source code will be tested before it is released for real world environment

**Techniques:**

1. In reviewing documents, a combination of reviews and walkthrough of the whole document will be conducted. Prior to submission of document related artifacts for approval, the writer of these documents are required to evaluate them against corresponding guidelines and associated checklists.
2. Functional requirement documents will require both Technical and Functional Reviews. Execution of these reviews will be recorded.