**PRACTICAL – 8**

**AIM**: List at least 5 online or offline Software Maintenance tools & prepare the detail case study on “Google Play Store” Maintenance document as a Google Play Store Developer.

**THEORY**

Software maintenance is a part of Software Development Life Cycle. Its main purpose is to modify and update software application after delivery to correct faults and to improve performance. Software is a model of the real world. When the real-world changes, the software requires alteration wherever possible.

The list of maintenance tools is given below.

* Bugzilla:
  + This program is used by thousands of software companies as a "defect tracking system."
  + The program keeps track of bugs that crop up in a software product and allows individuals or groups of developers to communicate and solve the problems.
  + Bugzilla allows software engineers to manage quality assurance, track bugs and submit bug-fixing patches to review.
  + The program is technically free, though they charge for extensive support issues.
  + Bugzilla is a secure program that has the ability to scan and correct database inconsistencies.
* HP Quality Center:
  + This Web-based application helps software engineers put their programs through the ringer by testing them for various bugs and errors.
  + HP Quality Center has the ability to plan and schedule tests, analyze results and manage issues and defects.
  + There are three versions of the program, the most extensive of which has the ability to deal with hundreds of applications at the same time with management teams distributed throughout the world.
  + The starter edition is available with a free download from the HP website.
* IBM Rational Quality Manager:
  + The IBM Rational Quality Manager is similar to the HP Quality Center in that it conducts tests using an Internet-based application.
  + The program lets users customize the way the information is presented through custom-designed dashboards, and it lets them schedule their software tests with the various members of their team.
  + These tests can be automated or done manually if there is a particular area of the software the engineers wish to get a closer look at.
  + The program description states that it will accelerate project schedules and ensure that applications meet the objectives of the company.
  + The express edition is available for download at the IBM site.Smoke Testing
* Micro Focus SilkPerformer:
  + Micro Focus SilkPerformer is a program that can be used by large enterprise-class companies to develop software applications through extensive testing.
  + The Micro Focus site states that the program can accelerate the resolution of problems by finding them early in development cycles.
  + SilkPerformer has full support for all Web 2.0 applications and efficient test cycles and test creation.
  + The program performs load tests that can be viewed across many environments in an effort to quickly determine if there are conditions that cause it to crash.
  + A trial version of the program is available from the Micro Focus site.
* Sage 300:
  + Provide companies with an overview of their business by assuring a single repository and compliance with procedures
  + Equip the technical services with a maintenance solution tailored to their business, easy to use and quick to deploy
  + Optimize spare parts, stocks and supplier’s management
  + Avoid the risk of errors between Sage 300 business management and CMMS
  + Apply the rules of business management to CMMS at every step of inventory and purchasing management process (e.g. replenishment threshold, control units, main supplier, …)

**MAINTENANCE DOCUMENT FOR “GOOGLE PLAY STORE”**

**Objective:**

Google play store is a platform where user can enjoy millions of the latest Android apps, games, music, movies, TV, books, magazines & more. The purpose of maintenance is to ensure the maximum efficiency and availability of production equipment, utilities and related facilities at optimal cost and under satisfactory conditions of quality, safety and protection for the environment.

**Duties:**

The maintenance team will take care of regular maintenance check. The regular check up of the system will be executed by them.

The maintenance manager will make sure that tasks are performed on time and he will report the updates.

**Preventive Maintenance:**

Google play store is a platform where users can upload their content so preventive maintenance plays important role.

The main activity of preventive maintenance is to keep a watch on the content that is being uploaded.

In case of upload of any harmful information, the strict actions will be taken against the user.

The routine check-up will involve the testing of all major components of software on monthly bases and solve detected bugs.

On yearly basis, User Interface should be checked for updates.

For optimizing the backend logic, half yearly check-up can be performed.

**Corrective Maintenance:**

The system failure will take the at most priority. The cause of crash should immediately be recognized and actions should be taken to fix it.

In case of malperformance of the system, the malfunctioning part can be isolated if known and it can be taken care of separately.

If malfunctioning part is not detected, the system can be out of service for certain amount of time and problem can be taken care of.

As the time passes, some functions or services can be deprecated, that would fall under maintenance as well. Those components should be replaced with another.

The Google play store will give every user the right to report bugs. Those bugs will be ordered by the danger for system and will be resolved altogether unless it poses potential damage to the system, such bugs are requested to solve as early as possible.

**Maintenance execution and inspection:**

The maintenance supervisor is the responsible for the correct execution of the maintenance work. When the work is done, he must register the shift remarks and positive variances in work order sheet if it was a scheduled corrective maintenance also evaluate de performance of the contractor services adding to the sheet or generating a work report as needed for futures references.

**CONCLUSION:**

In this practical, we learned about software maintenance. We found some tools for software maintenance. We wrote a brief case study on the maintenance document of one of the famous service provided by Google called Google Play Store.