**PRACTICAL-2**

**AIM**: List at least 10 Agile Development tools for desktop and mobile application development in IT industry and prepare the detailed case study on “JIRA Tool” for Agile Development.

**THEORY**

* 1. **JIRA**

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JIRA](https://www.atlassian.com/software/jira/free) is a defect tracking tool which is used for Agile testing as well as project management. This tool is not only used for recording, reporting but also integrated with code development environment.

**FEATURES:**

* JIRA Query Language helps to create quick filters with a single click
* This agile tool helps your team become more accurate and efficient
* Reporting functionality gives team critical insight into their agile process
* Extensive reporting functionality gives your team critical insight into their agile process.
* Allows creating custom workflows of any size which is helpful to build, test, and release software
  1. **ZEPHYR**

[Zephyr](https://bit.ly/30Nryg8) is the #1 selling test management tool, providing end-to-end solutions for agile teams of all sizes. Get the flexibility, visibility, and insights you need to release better software FASTER

**KEY FEATURES:**

* 1-click Integration with JIRA, Confluence, Jenkins, Bamboo, and more
* Cloud, Server, and Data Centre Deployment Options
* Advanced Analytics and DevOps Dashboards
* No Annual Commitment Required
  1. **SPRINTS**



Sprints is a tool that helps you to manage your team and product with ease. It enables you to track your progress with no hassle. This software can be used to find bottlenecks and discover ways to generate business value.

**FEATURES:**

* It is integrated with CI/CD tools.
* This tool helps you to get product feedback with ease.
* Allows you to work on any device and place.
* Enables the team to comment on code changes.
  1. **SNAGIT**

Snagit is a popular screenshot capturing tool. It provides powerful tools to edit, annotate and share screenshots. It can also be used to submit and push screenshots directly.

**FEATURES:**

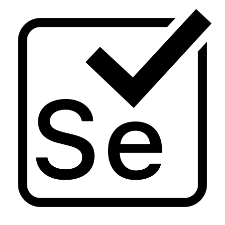
* This agile testing tool offers complete features for screen capture and video recording
* Capture videos with a simple, intuitive screen recorder
* Capture a website, record an online meeting or send feedback in an email
  1. **JMETER**

Jmeter application is an open source agile performance testing tool.

It is used to load functional test behavior and measure performance

of the website.

**FEATURES:**

* Ability to load and performance test different applications/server and protocols
* Full featured Test IDE for fast Test Plan recording
* This agile tool offers complete portability and 100% Java purity
* Data analysis and visualization plugins offers great extensibility
* Functions can be used to offer dynamic input to test or provide data manipulation
* Easy Continuous Integration using third party libraries for tools like Maven, Gradle,and Jenkins
  1. **SELENIUM**

Selenium is an automation agile testing tool. It aims to mimic the behavior of a real user, and as such interacts with the HTML of the application.

**FEATURES:**

* It is a compact Object Oriented API
* This agile tool Support for different languages like Java, Python, Ruby, Perl, PHP, and Java script
* Selenium server initializing is not required
* WebDriver finds any coordinates of any object
* It is easy tool for a WebDriver to build a keyword driven framework
  1. **APPIUM**



Appium is an open-source and free Agile tool. It is helpful for automating mobile web, iOS, and Android and hybrid applications. Native apps are those written using Android, iOS, or Windows SDKs.

**FEATURES:**

* Easy process setup process
* This best agile tool supports Safari on iOS and Chrome or the built-in 'Browser' app on Android
* It can automate Native, Hybrid, and Web mobile applications
* It supports programming languages like- Java, PHP, Ruby, Python, C#, etc.
* This agile testing tool allows native, hybrid and web application testing on physical gadgets as well as on emulator or simulator.
  1. **BACKLOG**

Backlog is an all-in-one project management tool built for developers. Agile Teams use Backlog to work with other teams for enhanced team collaboration and high-quality project delivery.

**FEATURES:**

* Easy bug tracking tool
* Project and issues with subtasks
* Git and SVN built-in
* Gantt Charts and Burndown charts
* Wikis
* Watchlists
* Native mobile apps
* Available both in cloud and on-premise
  1. **SOAP UI**

Soap UI is an agile testing tool for service-oriented architectures (SOA) and REST. Its functionality includes web service inspection, invoking, development, functional testing, and load testing.

**FEATURES:**

* It is open source testing tool
* This agile tool offers Drag and Drop Test Creation
* It allows reusing functional test cases and security scans in just a few clicks
* It Supports Data-Driven Testing
* Multi Environment Support
* Allows service Simulation
* Static Content Mocking
  1. **USERSNAP**



Usermap is an Agile testing tool that allows web developers to get screenshots of bugs. This tool helps testers and developers communicate bugs easily.

**FEATURES:**

* Runs on every known web browsers
* This best agile tool Connects users with clients and colleagues
* Does not impede website speed
* Get visual bug reports with advanced client-side error recording
* Supports Single Page Applications

**CASE STUDY ON “AGILE DEVELOPMENT WITH JIRA”**

**Overview**:

Complaints about project management tools are an old cliché in the software development industry. They can be heard from people in many roles, in companies of all sizes, and from all countries. When listening to them, one could come to believe that, oddly, none of the more than one hundred tools existent in the market solves the problems it should.

On top of that, it's particularly interesting to note that the most popular tool in the industry, Jira Software, is notably the most infamous. Most project management tool users, both heavy and light users, have a negative opinion of Jira — weirdly, even those who have never been in direct touch with it. Several times, I have heard statements like: "I've never used Jira, but I know it sucks," and "Project management tools such as Jira are counterproductive because they slow down the team." It's almost like companies were adopting Jira just to go against the grain. Not surprisingly, though, such comments usually come from teams that follow no specific methods and processes of work and in which no one has significant experience with project management.

Agile teams use an iterative approach to break down complex projects. In the past, software development teams often failed to meet deadlines because of the sheer complexity of their work. The agile methodology for project management was developed to address the many inefficiencies present in traditional software development projects.

The agile methodology is based on four basic tenets:

* Individuals and interactions over processes and tools
* Working software over comprehensive documentation
* Customer collaboration over contract negotiation
* Responding to change over following a plan

Agile project managers embrace change. Since working software is the primary measure of progress for agile teams, the trajectory of the project is bound to change as feedback from clients, customers, and team members are integrated with each new release. While this might sound like it would slow the whole process down, it actually makes teams more nimble and ensures higher code quality.

Jira has adopted agile principles into every facet of their software. Agile teams can quickly and easily navigate charts, long-term goals (epics), and tasks. Tracking issues and spotting bugs can also be done automatically by Jira Software.

**CONCLUSION**

Jira is a powerful project management system with planning, tracking, releasing, and reporting all in one place. Teams are able to access information about tasks, productivity, bugs, and code quality in one location.