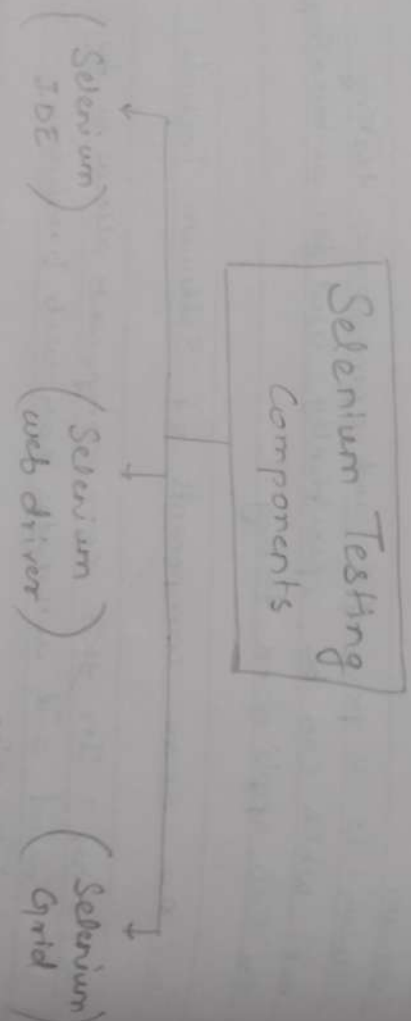Aim: Test driven development Using Selenium.

Selenium:
Selenium is a powerful and open-source testing tool which can be specifically used for automating the web application testing.

· There are some components of Selenium include:

· Web driver : In this core component allows us to control and automate each web browser interaction.

· Grid : this core component allows us to run the parallel testing on amultiple machine or browser which makes it ideas for large-scale testing cases.

· IDE : this core component is a browser extension that provides on integrated development environment for creating and run times Selenium test case.

→ Benefit of Using Selenium:

· It provides the facility of cross-browser testing and support various browser for comprehensive testing.

· It help in reducing the risk factor which may create an issue further.

· It helps in scraping out the data from the website.

Selenium Testing
Components

```
                Selenium Testing
                  Components
          ┌──────────┼──────────┐
          ↓          ↓          ↓
    ( Selenium   ( Selenium   ( Selenium
        IDE )    web driver )    Grid )
```

Output:

PageTitle : https://www.chrome.com

  └ It will redirect you to this
    domain after successful
    Execution of the Code.

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- It is open-source and anyone can use it without the need of any license.
- It support multiple programming language like java, python, C# and Ruby.

Step / procedure :

01. Start.
02. Install JDK for the testing environment & coding.
03. Choose the programming language – Java.
04. Use "PiP install Selenium" and install all the Selenium Libraries.
05. Download the web driver.
06. Setup the environment.
07. Write the necessary code and run the necessary task.
08. Stop / End.

CODE :

```
import org.openqa.selenium.webdriver;
import org.openqa.selenium.Chrome.Chromedriver;
public class Simple Selenium {
    public static void main(Strings[] args) {
        System.setProperty("webdriver.chrome.drivers", (Path)
                to chromedriver");
        Webdriver 2 new chromedriver();
        driver.get("http://www.chrome.com");

        String pagetitle 2 driver.getTitle();
        System.out.println("Page Title :" + Pagetitle);
        driver.quit();
    }
}
```