Selenium is a web based automation tool (or you may say library). It has 3 main components:**IDE, WebDriver, grid,** but we call it as selenium. Majorly we use WebDriver for automation.

Selenium supports only web based applications.

The applications can be:

1)- **web** - accessible wia internet, actually any web resource.

2)-**desktop** these application we can download and install on the local system and use it locally no need to use internet

3)- **mobile**

Advantages:

1) - Selenium is open source and free

2) - supports multiple OS

3) - supports multiple browsers (we can run the same tests on different browsers).

4) - supports multiple languages (Java, python, C#...) but we can not use multiple languages in one project !

5) - integrate third party tools in to selenium (TestNG…). Whenever we find some limitation in selenium we can override that limitation by integrating some third party tools.

Disadvantages:

1) - do not support desktop applications. But we can overcame it with use of: Aoutoit, sikuli, Robot API.  
2) - Reporting are not supported. But we can overcome it with use of TestNG, Extent\_reports…

3) - cannot support Excel files. We can overcame it with Apache poi. While driving the data driven tests we need something where to keep the information for these tests (it can be DataBase of Excel sheets…). Since we run the tests automatically we need some kind of a tool to provide these information to the tests. In other words how to reed the data from the Excel or DataBase. And again we can integrate Apache POI.