

# DBTesting

- Test data generation tools help the testers in Load, performance, stress testing and also in database testing. Data generated through these tools can be used in other databases as well.
- Some tools also provide security to the database by replacing confidential data with a dummy one. At the same time, it also preserves the confidential data. These tools also provide an option to output the generated data in the SQL scripts. Hence in this way, these tools help a lot in testing and development of applications.
- Load, performance and stress testing are just impossible without the help of these tools. These tools are easy to use and in turn, save a lot of time. It not only saves time for creating scripts, but it has also made data generation easy. With just a few simple clicks, you will be able to create a large volume of data.

- A lot of tools provide complex database features like Referential integrity, Foreign Key, Unicode, and NULL values. With free or open source tools you may not get all the required features, but those companies also provide advanced features by paying some cost.
- Lots of test data generation tools are available in the market. However, while selecting a tool you must consider some factors like supported databases, data generation methods, data types support, operating system support, and cost etc.

- It supports all popular database systems like Microsoft SQL Server, IBM DB2, Oracle, PostgreSQL, Firebird, MySQL, and more.
- It has more than fifteen methods to fill in the fields with random and repeatable data.
- Seventy built-in functions and expression processor.
- This product checks an existing database schema and automatically solve the master-detail key structure.
- It provides a wide range of external data sources: databases, CSV or text files, XML documents, Excel, spreadsheets, etc.
- Variables and Named Generators features provide a way to share data generation properties to similar columns.
- It supports all modern Windows versions: Vista, XP Windows 7, Windows 8, Windows 10, Windows Server 2003, and more.
- It provides a range of data types, including city, country, country code, street address, latitude, phone, state, and more.

# DB Unit test

- Creating an up to date schema, managing schema changes
- Setting up data (reference data, test data) and **maintaining** test data
- Keeping tests independent
- Allowing developers to work concurrently
- Speed (tests involving database are typically slower and will make your whole build take more time)

- Prefer in memory database if possible (for speed)
- Use one schema per developer is a must (to allow concurrent work)
- Use a "database migration" tool (à la RoR) to manage schema changes and update a schema to the ultimate version
- Build or use a test harness allowing to put the database in a known state before each test and to perform asserts against the data after the execution (or to run tests inside a transaction that you rollback at the end of the test).