Supercharging Progress™

Gatekeeper: Ensuring data accuracy, integrity and completeness

```
import datetime

now = datetime.datetime.now()

print
print "Current date and time using str method of datetime object:"
print str(now)

print
print "Current date and time using instance attributes:"
print "Current year: %d" % now.year
print "Current month: %d" % now.month
print "Current day: %d" % now.day
print "Current hour: %d" % now.hour
print "Current minute: %d" % now.minute
print "Current second: %d" % now.second
print "Current microsecond: %d" % now.microsecond

print
print "Current date and time using strftime:"
print now.strftime("%Y-%m-%d %H:%M")
```

What is **data testing?**

Data-driven organizations make vital decisions based on data analysis. However, data testing can be a complex and hectic task with scope for error due to multiple reasons including incorrect data mapping, data quality issues, data loading issues, lack of datasets etc. As a result, the data testing challenges pose a threat to trust in data, which often affects their ability to use data as an asset.

Data testing challenges faced by companies

While testing data for inaccuracy and defects, conventional methods often prove inefficient and hectic. Some of the primary challenges that organizations face while testing data include:

- The lack of access to data sources, as conventional methods primarily depended upon manual data testing. This would require the generation of large volumes of data, an outdated method that can be improved if automated.
- Manual data testing involves complex SQL queries that often leave space for errors. As a result, errors in data testing lead to unsuccessful testing of products. Deploying automated data testing methods must overcome this.
- Conventional data testing methods have been identified to detect most defects during the operation's last leg.
- Conventional data testing methods are time-consuming and require a lot of workforce and resources. However, if allocated to other tasks, these resources can increase productivity.
- While testing data on a platform, different teams run the risk of using the same datasets at times, leading to data corruption! In addition, using the same datasets can lead to inaccurate data testing statistics.

Introducing Gatekeeper: A reliable, automated data testing and reconciliation solution

HCLTech Gatekeeper allows you to automate data testing by deploying zero-touch data testing. Zero-touch data testing replaces manual and complex SQL queries, which are prone to error. Error-free and graphical data testing results enhance product quality, satisfied customers, and better business overall! With the automation of data generation, declarative code testing, data process testing, and data reconciliation, businesses can expect a reduction of efforts spent on data testing by 40%.

How **HCLTech Gatekeeper** can help:

An intuitive, Web-based UI allows user access control management while creating visualizations for test cases and their results.

It allows sample data generation and takes data snapshots to enhance test data management.

The reconciliation results provided by Gatekeeper point toward the erroneous data sets rather than just passing or failing test cases.

Data validation rule templates allow Bulk test cases to be uploaded and validated with ease.

Gatekeeper, as a **data generator**

Gatekeeper can generate new data sets to test the legitimacy and adequacy of new or revised software in affirmative and negative test cases. Gatekeeper generates data sets that test software affirmatively. These data sets verify the adequacy of the software by comparing the output received by providing inputs with expected results. Gatekeeper also generates inconsistent data to test the code against unexpected and extreme inputs. It ensures compliance with data security regulations by masking data and maintains uniformity in the test data. Also, it can generate complex data in bulk to test a software's performance and can handle heavy loads.

Gatekeeper, as a **data generator**

Declarative code testing focuses on accomplishing results, and it is carried out to validate the end results, their compliance, and the standards of the code. Gatekeeper enables this and facilitates test-driven development, allowing simple and bug-free coding. The validation of results exposes issues during the earlier stages, saving a lot of time. Gatekeeper ensures that the codes tested meet the compliance requirements and allows implementation of Code Governance, therefore ensuring quality. Early identification of errors reduces reworks, which ultimately leads to greater ROI.

Gatekeeper for **data process/transformation testing**

Gatekeeper ensures that data is moved from its source to the target only when properly manipulated, transformed, curated, and converted so that they can meet several business rules. Gatekeeper supports heterogeneous data sources and formats, which allows this software to take data from wider sources. Data transformation testing carried out by Gatekeeper ensures that business transformation logic is applied to the code before they are delivered. This data testing software features standard transformation templates, which are pre-defined, and performs column-level transformation testing.

Gatekeeper for **data reconciliation**

Data conciliation is a phase of data migration that compares the target data to the one obtained from the source to ensure accurate data transfers. This phase must be carried out carefully to ensure the accuracy of data and the reports constructed based on this data. Missing, incorrect, and broken records are identified during this phase. It is characterized by reconciliation rules such as column validation, metric validation, pattern checks, and relationship validations, among many others. HCLTech Gatekeeper makes data testing easy, error-free, and saves organizations a lot of time, and resources, which leads to greater ROI. Furthermore, from a long-term perspective, HCLTech Gatekeeper is capable of creating an automated workflow, which will boost the productivity of the organizations considerably!

Business **benefits**

60% Improved time-to-market

40% Effort Reduction

80% Highly customizable

35% Cycle time reduction

40% Increased test coverage

100% No vendor lock-in

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