TEST DATA GENERATION

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CSD370 Assignment 9.2

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**AUTOMATED TEST DATA GENERATION**

Description

This method uses data tools that have built in processes for running automated tests. This technique leads to larger quantities of test data and yields accurate results. Being automated, the demand for manual input is low, which allows better allocation of staff to projects that demand hands-on work.

Costs

The major downside is the cost. Since this method relies on third party tools to conduct its evaluations, there are a few aspects to keep in mind. The price point of the software is the first consideration, and the cost of implementing the software into your system’s framework should be considered as well.

Application

This tool would be best used in situations where you don’t want to allocate too much of your labor to test data collecting. Also, it can be highly beneficial if you need to run repetitive tests on a single process multitude of times.

SOURCE: <https://www.testbytes.net/blog/5-test-data-generation-techniques-to-know/>

**PATHWISE TEST DATA GENERATORS**

Description

Path wise is a very direct form of test generation. The primary purpose of this method is to test a direct path function. To accomplish this task this tool requires two primary inputs from a user including the program to be tested, and the tested criterion that includes the path coverage to be used.

Costs

This method is considered one of the better forms of test data generation. If you were to evaluate a downside of it, it would be in the fact it needs specified pathing. Any alteration to this path or outliers that affect how it performs can cause this test to not work as intended.

Application

This method is great for forecasting. If the data collection you need is to create predictive data as to how the program might perform, this method would be best suited.

SOURCE: <https://encyclopedia.pub/entry/30615>

**CHAINING APPROACH**

Description

The Chaining method is more of an extension from the goal-oriented approach. Chaining is a design to assist in finding the end goal node or data being obtained. When initiated, the method attempts to work through the input path to reach the desired destination. If it is unable to find the result, it will chain and try a different path to get to the desired destination.

Application

This method can be useful in situations where the test data needing to be collected is in a path that cannot be found. Through its chaining method, it attempts to seek different pathing’s to reach the desired result.

SOURCE: <https://encyclopedia.pub/entry/30615>

A screenshot of a computer

Description automatically generated

A screenshot of a test

Description automatically generated