U.S. Student Data Warehouse Development

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DAT390

**Transformation Process to Data Warehouse**

Logically the initial step would be to determine what is the object the data warehouse seeks to address and render solutions towards. Presumably the organization charged with manifesting this data warehouse is doing so with the explicit purpose of solving a task. With this one must ask themselves what is needed to solve the aforementioned task.

Quantitative measurements would be the underline data placed with in the data warehouse. This being which schools are being granted the quantity of loans per program as well as age range to which schools students have to take out loans to supplement the cost of the tuition after governmental financial assistance.

The next logical step is to collect and analyze information. Analysis of the data sources can help in this. Also, it would behoove one to put in place tools to gather and arrange data to present it in a format that is understandable for any individual reading it. Data warehouses can automate processes for the purpose of reporting but if they are not organized properly this can add unnecessary difficulties to the overall process.

Next logical step would be to construct a conceptual data model of the data warehouse. This would be designed off the key parameters of what the warehouse is storing. In the example of the school this would be the loan data, location data, student age data, as well as any data pertaining to the cost per program and cost of governmental assistance.

The next logical step would be to locate the data sources and establish data transformations. This would ensure any future collected data is being fed into the data warehouse which in turn would ensure that any data being retrieved is still relevant and not old information. Ensure data is properly scrubbed so it is relevant. Even missing data can be sometimes extrapolated from other data (for example a zip code can be derived using an address and city).

The next logical step is to track the data. Dara warehouses require vast amount of detail to function properly. As data ages, it can be condensed and summarized to make room for new data prevalent to the topic at hand.

**References**

* Coronel, C., Morris, S. (20160126). Database Systems: Design, Implementation, & Management, 12th Edition [VitalSource Bookshelf version]. Retrieved from vbk://9781337509596
* Walls, D. (1999). 7 Steps to Data Warehousing. Retrieved from <https://www.itprotoday.com/sql-server/7-steps-data-warehousing>
* Coronel, C., Morris, S. (20160126). Database Systems: Design, Implementation, & Management, 12th Edition [VitalSource Bookshelf version]. Retrieved from vbk://9781337509596