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Assignment 01- Databases and Tables

Introduction

Historically, the ways in which different forms of information have been stored has varied widely based upon technology and size. With recent technological advances, databases have developed into digitized collections of information. Within each database, data is organized and stored through tables, indexes, and procedures to make information access easier and more immediate than ever before.

Databases and Tables

The methodology of storing records has existed throughout human history. It is only with the advancement of computers and digitization of paper-based records that modern computerized databases have become prolific. Digital databases allow organizations to store, track and report astoundingly large amount of data. The ways in which data is organized within each database is through objects called tables (entities). Depending on the amount of stored data, a database may consist of tens, thousands, or millions of tables. The number of tables in each database is limited only by the amount of data needing to be stored by the user and the number of objects allowed in the database. Each table consists of rows (tuples) and columns (attributes). Like a spreadsheet, tabular columns signify the attributes the user wants to express while rows contain the actual data. Tables within and across databases can also have relationships between them, defined by specific column keys that uniquely identify and serve to reference the same column keys in another table. Within these databases, tabular data can also be managed, organized, and manipulated using programming languages such as a structured query language (SQL).

Summary

While databases have existed across human history in a countless unique forms, the recent advancement of computers as lent itself to the digitization of large amounts of information and records. Previously constrained to paper, the ability to manipulate, organize, and track information was greatly limited by size and lack of power. Through the utilization of computerized databases, data can now be efficiently stored within tables, easily accessed, manipulated, and updated in a fraction of the time using programming languages.