

IS5102 – Database Management Systems

Practical 3



University of
St Andrews

Individual Report

Matriculation Id - 220032472

The Topic allocated to our group was to discuss on the ways and methods used to store and organize data before the introduction of database management systems around the year 1970. The Report explains the details of how different means of data storage system prevailed in the prehistoric times, along with the improvements made to store data in an efficient manner.

The report also compares the similarities and the differences between the methods used prior to 1970 against the modern ways of database management. Clear distinction has been made with respect to the comparisons, by considering aspects and features offered by different management systems.

The team decided to identify four major aspects of the topic and segregated the work amongst us, with each one getting a topic of their comfort. This allowed us to add in ancillary effort in terms of researching and benefitting from the subtopics chosen individually.

I had the privilege of researching and understanding the ways employed by historians to store the information and relate it with modern DBMS. The research was specific to the hardware and software used to store information, and to make distinct comparisons with systems that are available today. I was able to procure information from blogs, research papers and information regarding the working mechanism of the prehistoric data management tools and devices from research journals. Research papers on the 'Evolution of data management', gave some good insights towards understanding the history better in relevance to the given topic. These sources gave me an opportunity to understand the pain points faced in the prehistoric times to preserve data and to perform operations on the stored information.

There were some intricacies in finding relevant, in-depth information as most of the sources spoke briefly on the prehistoric hardware's used to manage data, and not many had a detailed explanation to capture the essence of how the technology worked. This led the research to be more constructive from our ways of understanding and come to a common conclusion when it came to making a particular comparison. Some of the resources just stated the name of the devices used and not on how it worked. This was due to the fact that most of the device parts were missing or weren't reconstructed to fully understand its working mechanism. This led to certain ambiguity in validating the correctness of data and to write about such devices by making the comparisons to modern systems. Only the information that were detailed and had hardware information that could fully quantify the working was used in making the comparisons.

This research and comparisons gave a good insight on the importance of this coursework and how the evolution in data management led to sophisticated, feature rich modern database that we can consume today, without much effort to load, retrieve and manipulate data. The ease of operation that is offered by the current period database management systems led to increased productivity, self service capability and reduced overall frustration in using the system.

Given the constraint on the timeline of the coursework, in-depth analysis of each of the evidence used to prove a topic, could not be made. Hence, I would like to analyse all the spoken material in this report in elaborate and detailed manner and would like to get hands-on experience with the aforementioned modern database systems and data analytics tools that can be incorporated into them. This would help me in making informed decision when it comes to choosing a database management system to provide solution to a real-world problem.

The collaborative effort put by the group, was a great catalyst in completing this report with all the necessary elements needed to validate the given topic. We as a team, had completed the initial draft of our research and moved on to identifying the topics that we could additionally work upon, to strengthen the report material. I was gratified with this approach as I was able to add in additional information to a different segment of the report. This also led me to correlate my initial research with the further information gathered. By explaining our understanding and the problems that we were facing with respect to assigned topic of work, we were able to get our doubts cleared and receive helpful advice from members of the team on how to get beyond our roadblocks.

I would like to thank the university for the providing this opportunity to work on this group assignment and improve my team-oriented skill. I would also like to thank the group for all their contribution and collaboration.