1. **Oracle Database**: is a relational database management system developed by Oracle Corporation that has been around since the late 1970s. It is one of the most widely used in large scale enterprise applications. It supports standard SQL as well as extensions that enable advanced functionality. It is best used for large scale applications that require high performance, scalability and reliability.  
     
   **Microsoft SQL Server**: is a relational database management system developed by Microsoft which makes it easy to integrate with the Microsoft ecosystem which includes technologies such as Windows Server, Active Directory, Azure Cloud and Visual Studio. It has been around since the late 1980s. It is best used on applications running on the Microsoft technology stack, such as .NET apps, SharePoint and Dynamics CRM, and on cloud applications using the Microsoft Azure services.  
     
   **IMB Db2**: is a group of data management products developed by IBM. Available on multiple platforms (Linux, UNIX, Windows, Cloud). It includes relational database management systems, data warehousing and data analytics tools. It offers security features including encryption, access controls and auditing. It is best used for large enterprise applications with diverse IT environments requiring multi-platform support and for applications using IBM’s Cloud services.
2. OLAP is designed for data analysis, it is used to discover patterns in larger pools of data like year-to-year sales and speed is not the most important. OLTP is designed to support daily transactions, and it is inherently faster and more efficient since it needs to read and/or update individual pieces of data quickly.
3. A data warehouse is a continually growing database that has the tools to analyze, query and report data trends. It is more flexible and allows more complex queries. It is usually formed by several “data marts” which are smaller and focus on a specific type of data. Data warehouses may contain both detailed and summary data. Some examples are Oracle’s Autonomous Data Warehouse, Amazon’s Redshift, Snowflake, Google BigQuery, IBM Db2 Warehouse and Firebolt.
4. According to Oracle, some of the benefits of choosing them for Data Warehousing are:
   1. 50% Reduction in financial closing time
   2. 60% Lower data administration costs
   3. 180X Faster query performance
   4. 417% Five-year ROI with five-month payback period
   5. 65% Reduction in DBA workloads for reporting
5. Oracle Exadata is a system designed to work with the Oracle Database workloads. It is high-performance, efficient and secure. It increases operational efficiency, reduces IT administration, and lowers costs for organizations.
6. A competitor to the Oracle database is Microsoft SQL Server. Some similarities between the two include:
   1. Both are Relational Database Management Systems (RDBMS) that store data in tables and support SQL.
   2. Both provide Scalability.
   3. Both provide Security Features.
   4. Both have plenty of support resources and documentation available for users.
7. - Name  
   - Address  
   - Date of Birth  
   - SSN  
   - Ethnicity  
   - Phone Number  
   - Desired Degree  
   - Classes  
   - Test Scores
8. - Retention rate  
   - Graduation rate  
   - Academic performance  
   - Diversity  
   - Financial Aid Allocation
9. As a mechanic in a repair shop, I could use a database to check customer information, vehicle maintenance and service history, and to check whether a part is available or not.
10. As a landscaper I could use a database to check customer information, for scheduling, to keep track of service quotes requested and those that I have provided already. I could also use one to keep track of business expenses like cost of products and equipment.
11. i. This report tracked students and faculty members lunch purchases over a five-day period as well as the type of food that was ordered.  
    ii. Dates, number of sales, types of sales, different foods.  
    iii. Which day of the week they might be busier and which type of food is more popular in their market.  
    iv. Might not need as much Lunchroom personnel if a specific weekday is slower. Can also be used when keep track of ingredients for specific food if there is a trend that can estimate how much they will sell of each so nothing gets overbought.

A screenshot of a computer

Description automatically generated