**10 Advantages of DBMSs**

**Learning goal: understanding advantages of DBMSs**

**Carry out some research into advantages of DBMSs and complete the following table.**

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|  | **Advantage** | **Description** |
| **1** | Data Redundancy Solution | In a DBMS data redundancy is eliminated or at least greatly reduced. Data Redundancy occurs when data is unnecessarily duplicated in various places. |
| **2** | Data Integrity | In a DBMS rules are enforced to maintain accuracy and in process ensures data is unchanged, accurate and trustworthy unless authorized actions are taken. |
| 3 | Efficient Data Access | Query languages offer fast and flexible data retrieval which enables improved productivity. |
| **4** | Data Security | DBMS systems provide a strong framework to protect data privacy and security. DBMS ensures that only authorized users have access to data and there is a mechanism to define access privileges. |
| **5** | Concurrency Control | Many users can access data at the same time without causing conflicts. |
| **6** | Data Standards | DBMS can ensure the upkeep of standards such as format of data, document standards etc. |
| **7** | Data Consistency | DBMS ensures data uniformity across applications and users – no conflicting versions of the same record. |
| **8** | Backup and Recovery | DBMS provides automated backup and recovery mechanisms to protect from data loss (failure, crashes, corruption). |
| **9** | Data Independence | Physical storage change (reorganizing or upgrading) doesn’t affect applications built on top of database. |
| **10** | Improved Data Access and Sharing | Allows for efficient data retrieval through query language and allows multiple users/applications to share the same data easily. |

Conclusion:

In a day-to-day business operation DBMS supports Cybersecurity by enforcing CIA Triad – all 10 sections clearly point to Confidentiality, Integrity and Availability, with Integrity being most represented one.  
DBMS is very important since it provides secure access, accurate data and reliable recovery in the ever raising threat of cyber attacks.