What core functions must all data systems have?

* Input – The process of receiving data into the system from various sources. This can include manual entry, automated sensors, APIs, file uploads, or any other method for importing data into the system for processing
* Search – The capability to locate specific pieces of data quickly and efficiently within the system. This function often includes query mechanisms, filters, or advanced algorithms to retrieve relevant information based on user-defined criteria
* Save – The ability to store data persistently so it can be accessed and used later. This involves mechanisms for writing data to databases, files, or other storage mediums, ensuring data integrity and security
* Integrate – The ability to combine data from different systems, formats, or sources into a unified view. This often involves processes like data mapping, transformation, and ensuring compatibility between disparate systems
* Organize (Index) – The structuring and categorizing of data to make it easier to access, process, and analyze. This typically includes creating indexes, metadata, or logical groupings to optimize data retrieval and usage
* Output – The process of presenting data to users or other systems in a usable format. Outputs can take various forms, such as reports, visualizations, API responses, or physical printouts
* Feedback Loop – A mechanism for monitoring and evaluating system performance or user interactions and using that information to improve the system. This can involve collecting user input, error reporting, or performance metrics to refine and enhance the system's functionality

What are the 2 main types of data entry error?

* Transcription (spelling mistakes, poorly formatted data)
* Transposition (when characters are accidentally swapped or rearranged during entry)