* DSA

→ Data Structure & Algorithms are two different things.

→ Data Structure : Arrangement of data so that they can be used efficiently in memory.

→ Algorithms : Sequence of steps on data using efficient data structures to solve a given problem.

→ Other Terminology :

→ Database : Collection of information in permanent storage for faster retrieval & updation.

→ Data warehousing : Management of huge amount of legacy data for better analysis.
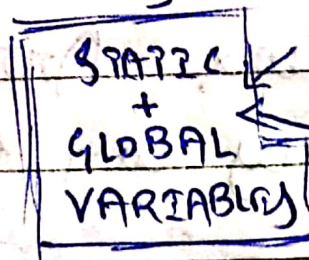
→ Big Data : Analysis of two large or complex data which cannot be dealt with traditional data processing application.

→ Memory layout of C programs:

→ When the program starts, its code is copied to the main memory.

→ Stack holds the memory occupied by the functions.

| HEAP |
| SPACK |
| UNINITIALIZED DATA |
| INITIALIZED DATA |
| CODE SEGMENT |

STATIC + GLOBAL VARIABLES

→ Heap contains the data which is requested by the program as dynamic Memory (RAM) memory.

→ Initialized & ~~that~~ Uninitialized data segments hold initialized & uninitialized global variables respectively.