

GIS Data Base

Data base its group of data or information which arranged and saved with defined system or structure . So for design data base there are 2 main principles must be done :

- 1- physical design : how and where to save the data as defend files system . Also the distribution of data to saving places and size of saving memories and spear copies also the emergency cases if it happen (data delete or memory errors or viruses .
- 2- logical design : it's the analysis of data to get the model between them , such as defined the main groups (towns names – schools- hospitals – gardens ...) each of them can be a main groups and the sub group other information , example : factory (main group) and the secondary information all as sub-groups (name of factory – number of workers – the productions type – phone No. -) .

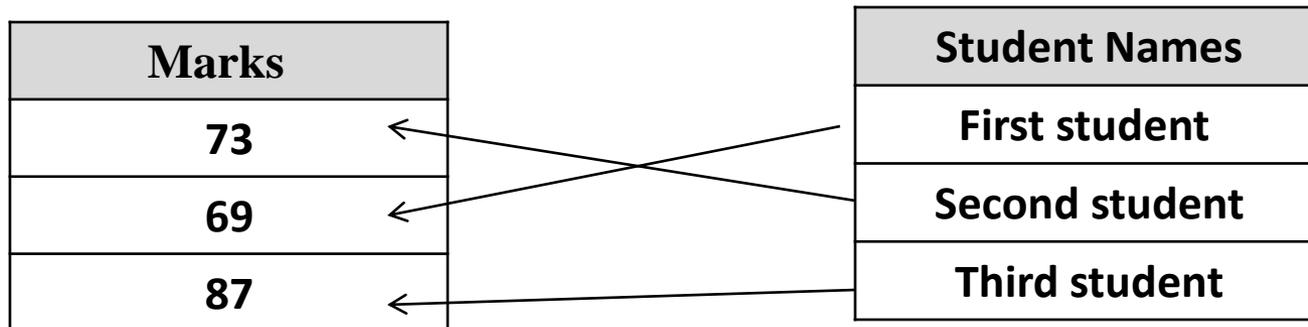
Data Link : mean the link between two different data base or tabular data one can continue the other with the same link , such first tabular

Data base the names of Hotels with all other information about the hotel (building year – no. of room – cost -) the second tabular data base the names of Towns so we can link between them to get the result (known Hotel with all his information and its address in that Town .

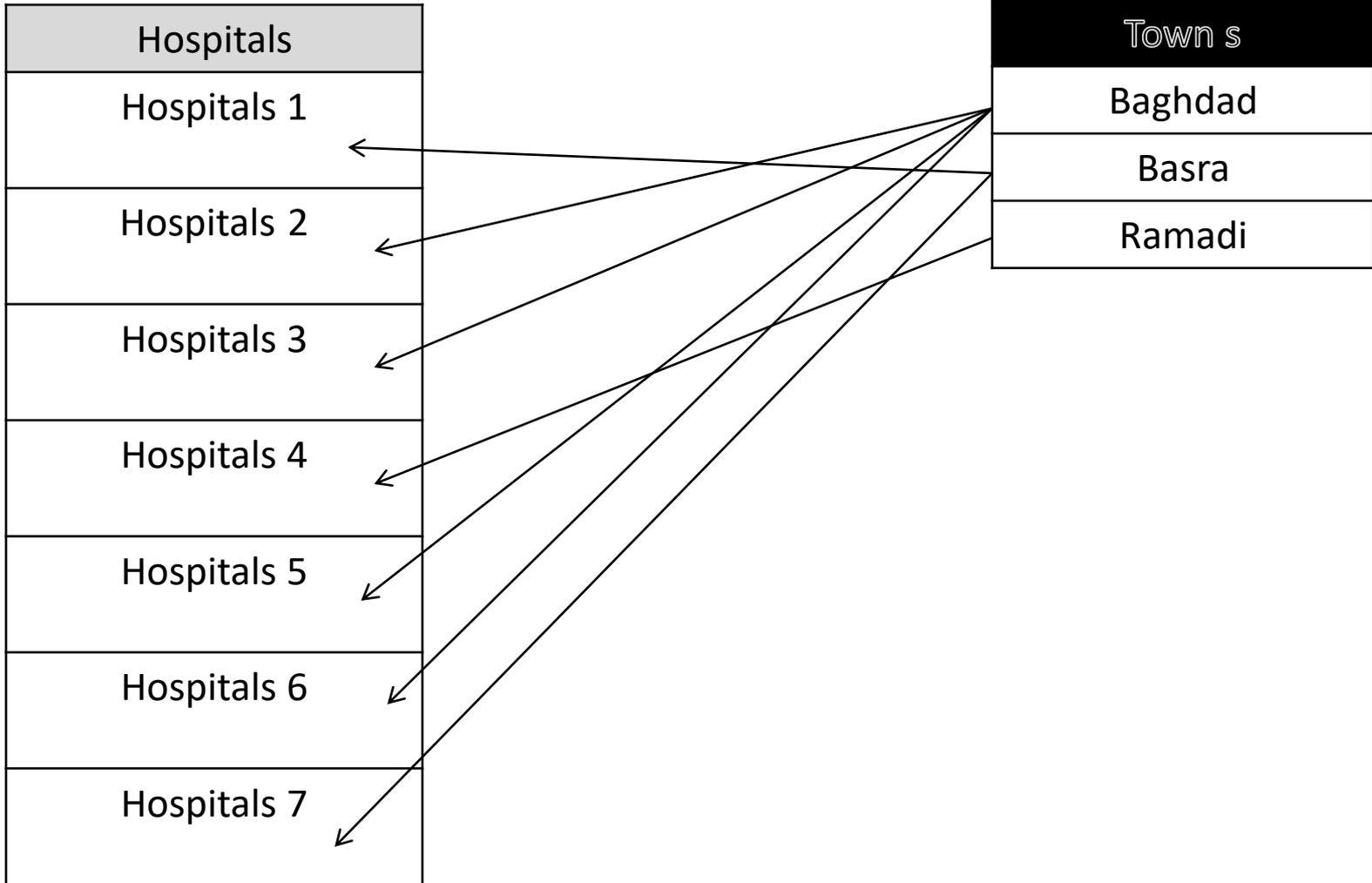
Types of Relations

There are 3 types of relation between the tabular data base

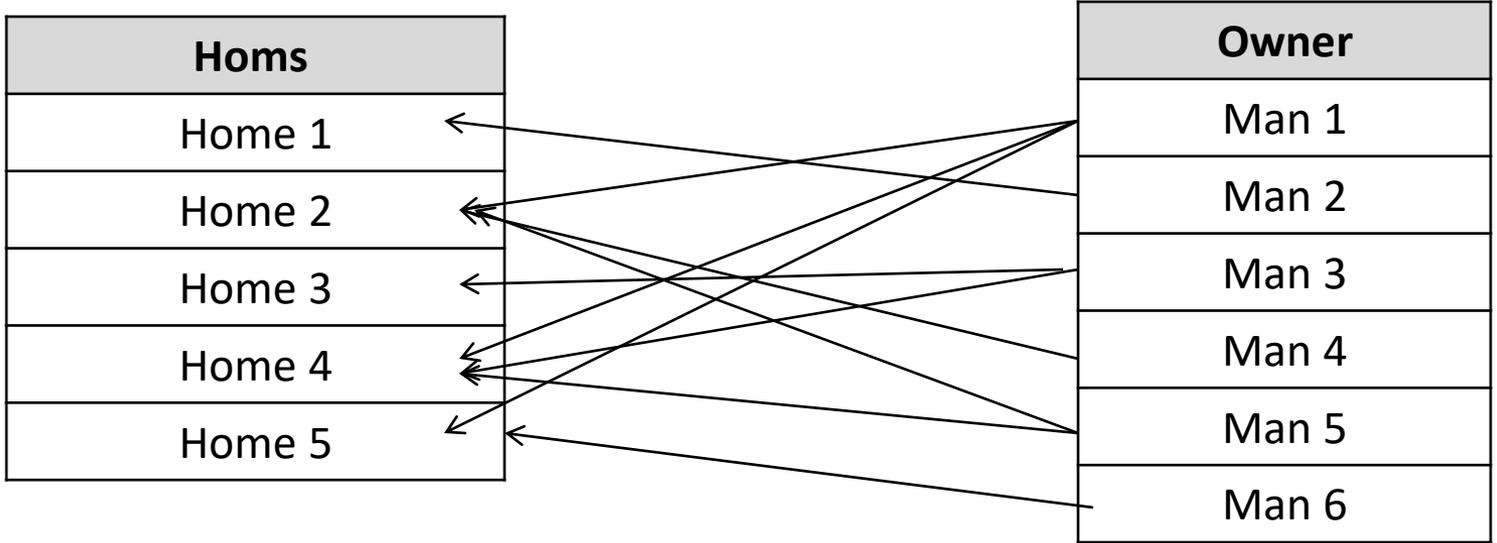
1- one element to one element : in that relation each element in first tabular data base will link with one element in the second data base ,
exp : name of students in first data base will link with the marks in the second data base .



2- one element to many element : in this relation one element in first tabular data base link with many other elements in second tabular data base . To give the malty information for each element .



3- many element to many element : its each element in first tabular data base will like with one or many elements from second tabular dada base , also same from second tabular data base will like with elements of first tubular data base .



Advantage of Data Base

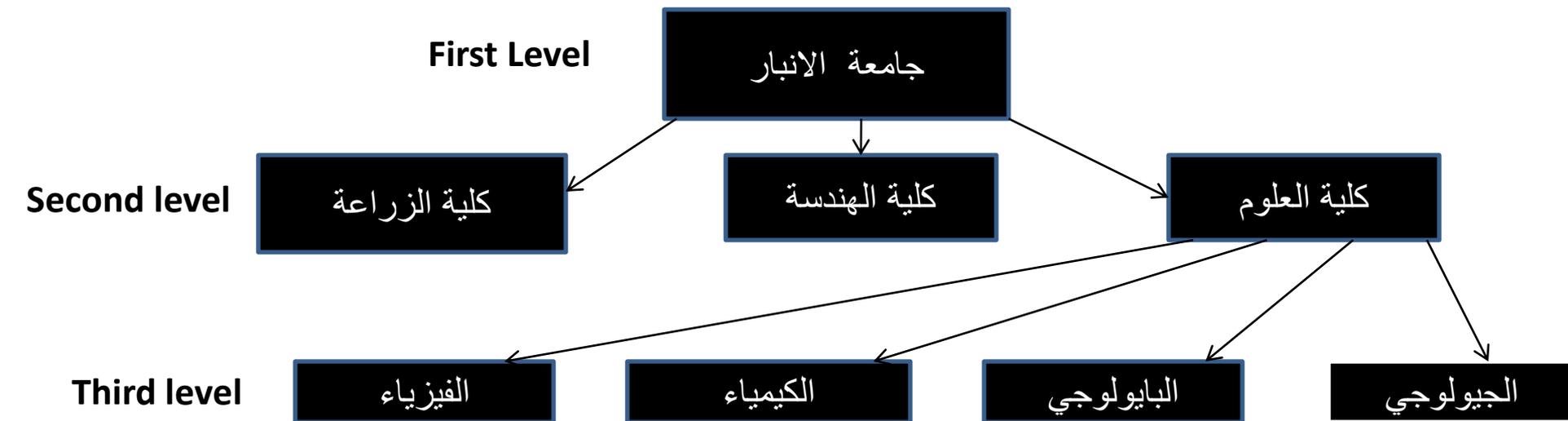
- 1- fast get to data to use
- 2- saving the data with same category in different tables
- 3- reuse the repeated data in saving which help in reduces saving disc size

- 4- can correct some parts of data base with out open all data bases
- 5- easy to use the data with soft wears
- 6- same data can reach many users in same time
- 7- can block some special data about some users .

Structure of Data Base

There are 3 general types of data base structures , different by their applications and design

1- Hierarchical Structure : in this structure the data arrange with its level of majority so the first level mean the general one then the second level the sub the third level the smallest data , and so on



2- Network Structure : it's the same structure but the main different in links , so any element in second level can be link with first level in one element or more than one or link between them also all element can be in link between them , this type of structure difficult in design so it used just in some applications .

3- Relational Structure : in that structure the data arrange in tables with different levels , any raw in table have all information to one element called Record and any column in table give data in one type to all element . And the intersect between raw and column call Field

Column



Lesson 3	Lesson 2	Lesson 1	Name
60	83	58	Student 1
96	59	77	Student 2
	Field		

← **Raw**