

Date
26/10/2019

Lecture

①

Data Object

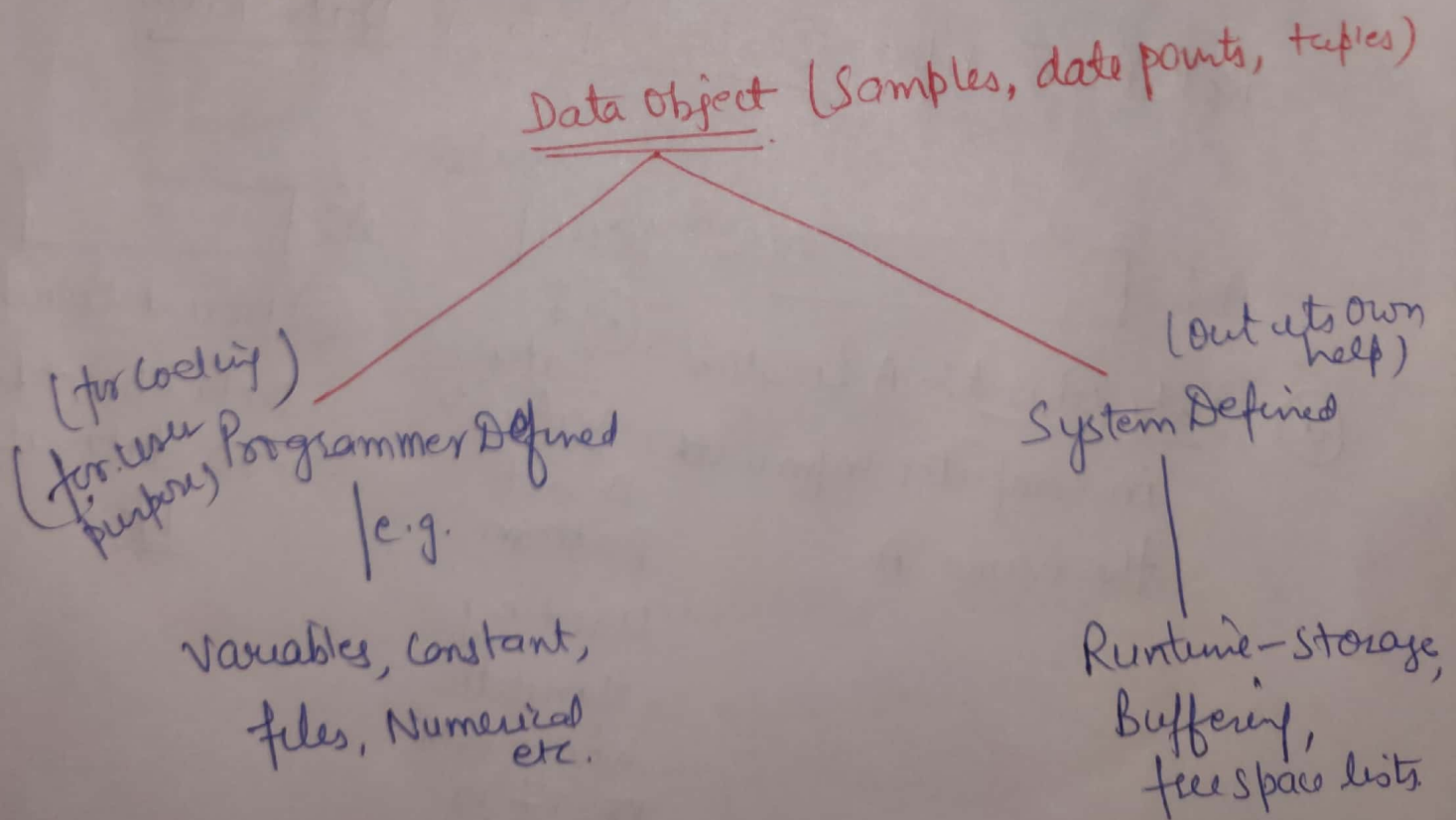
↓

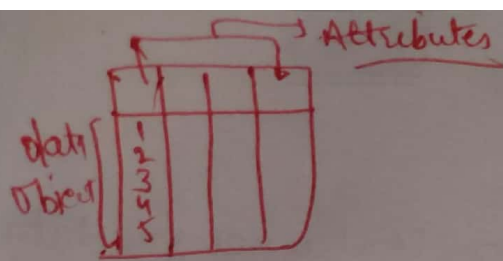
actually represents a container for data values, a place where data values may be stored and later returned.

OR

Def 2:- Grouping of one or more pieces of data in ~~the~~ virtual computer.

Def 3:- A location in memory with an assigned name in the actual computer.





(2)

Data values

values contained in the containers

Single number

Pointer to other objects

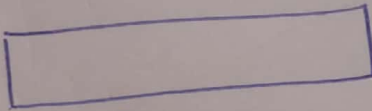
(Referencing (addressing))

Character

Data object is usually represented as a storage in Computer memory and a data value is represented by a pattern of bits.

Relation b/w Data objects & Data value :-

A:



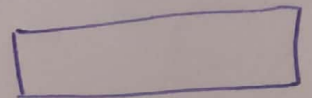
(a) Data object :- A location in Computer m/m with the name A.

10001

(b) Data value :-

A bit pattern used by translator whenever the no. 17 is used in the program

A:



(c) Bound variable :-

Data object bound to data value

17

Data object is Elementary if it contains a (3)
data value that is always manipulated as
a single unit.

Data object can be a data structure if it is
an aggregation of the data objects

E.g.:- Arrays

Binding & Attributes of Data objects →

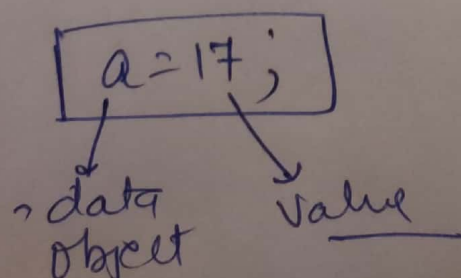
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Association of data values of entities

① Type:- Associates the
data object with the set of data
values that the object may take.

② Location:- Binding of a storage location in
memory where the data object is represented.

③ Value:- Binding usually result of an
assignment operation.

int 'a'



(5) Name:- Binding to one or more names (4)
by which the object may be referenced
during the program execution usually
Setup by declaration and modified by
subprogram calls & returns.

(6) Component:- Binding of a data object to one
or more data objects of which it
is component is often represented by
a pointer value.

