Engineering Informatics

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Q) Primary Data :- Primary Data is the Data that has been collected from first hand experience, Primary data is unpublished data yet and is more reliable, authentic & objective. Primary data is not being changed or altered by humans thereby it validity is greater than secondary Data.

This can be collected by :-
1) Observation
2) Questionaire
3) Survey

Secondary Data :- Data collected from source that has already been published in any form is called as secondary data.

This Can be Collected by :-
1) Published printed source
2) (Government) Records
3) Unpublished personal Records.

Examples of primary Data:-

1) Conducting a survey among people whether they really need a metro service.
2) Route layout planning.
3) Estimated Budget to Complete the project

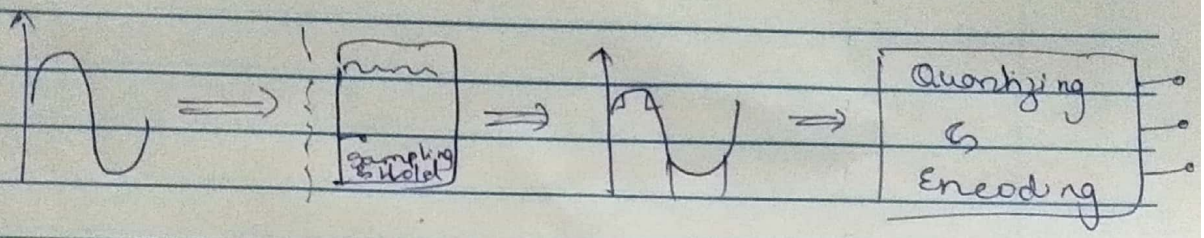
Examples of Secondary Data:-

1) Future planning to expand the metro service.
2) knowing peak time for the usage of the service and finding solutions.
3) Land aquisition document plays an important role in the metro Construction

Q2) On looking into their requirements, I would suggest operation Support System. It is categorized in 1) Transaction Management 2) Process Control System, 3) office Automation System.

1) The System maintains record about ~~dif~~ daily purchases, orders, track on the inventory Store and also on the count as a process
2) The System is useful and Can perform calculations as well as track on daily operation
3) This System also helps in maintaining records about the exchange.

Q3> ADC :- Analog to Digital Converter. It is an Electronic integrated circuit which converts a signal from analog to digital form. It provides a link between the analog world of transducers and digital world of processing and ~~of~~ data handling.



1. Sampling & Holding

a) It measures analog signals at Uniform time intervals It is ideally twice as fast as what we are Sampling.

b) Digital Systems works with discrete states and takes a sample from each location.

c) Reflects a Sampled and hold signal, digital approximate

2. Quantizing & Encoding

Quantizing Seperates the input signal into a discrete state with 'K' increments.

$$K = 2^n$$

$N \rightarrow$ No. of bits of ADC

Analog Quantization Size

$$Q = (V_{max} - V_{min}) / 2^N$$