NAME : ADIB ALI

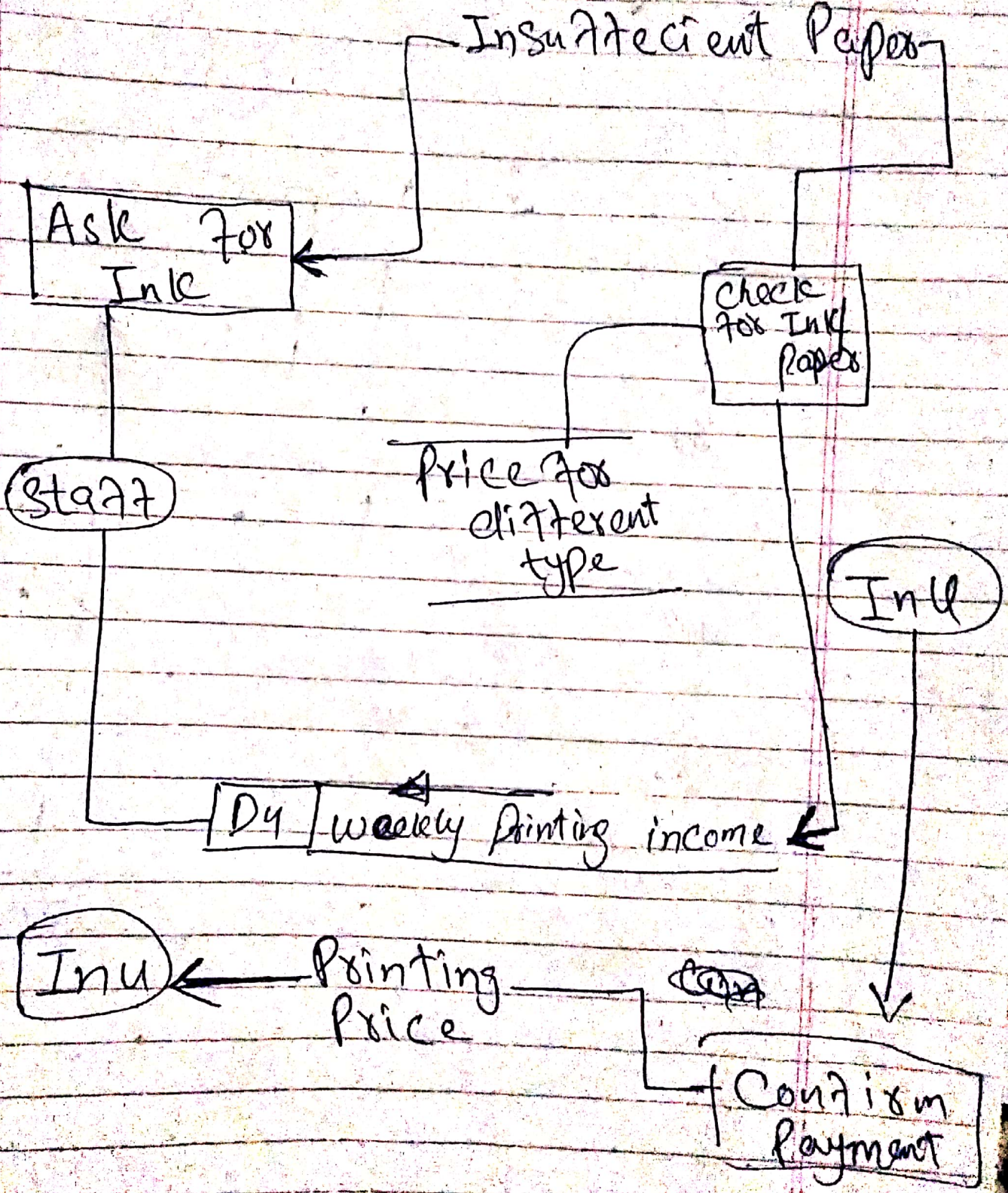
CLASS : BS(SE)

ID : 14943

PAPER : SE

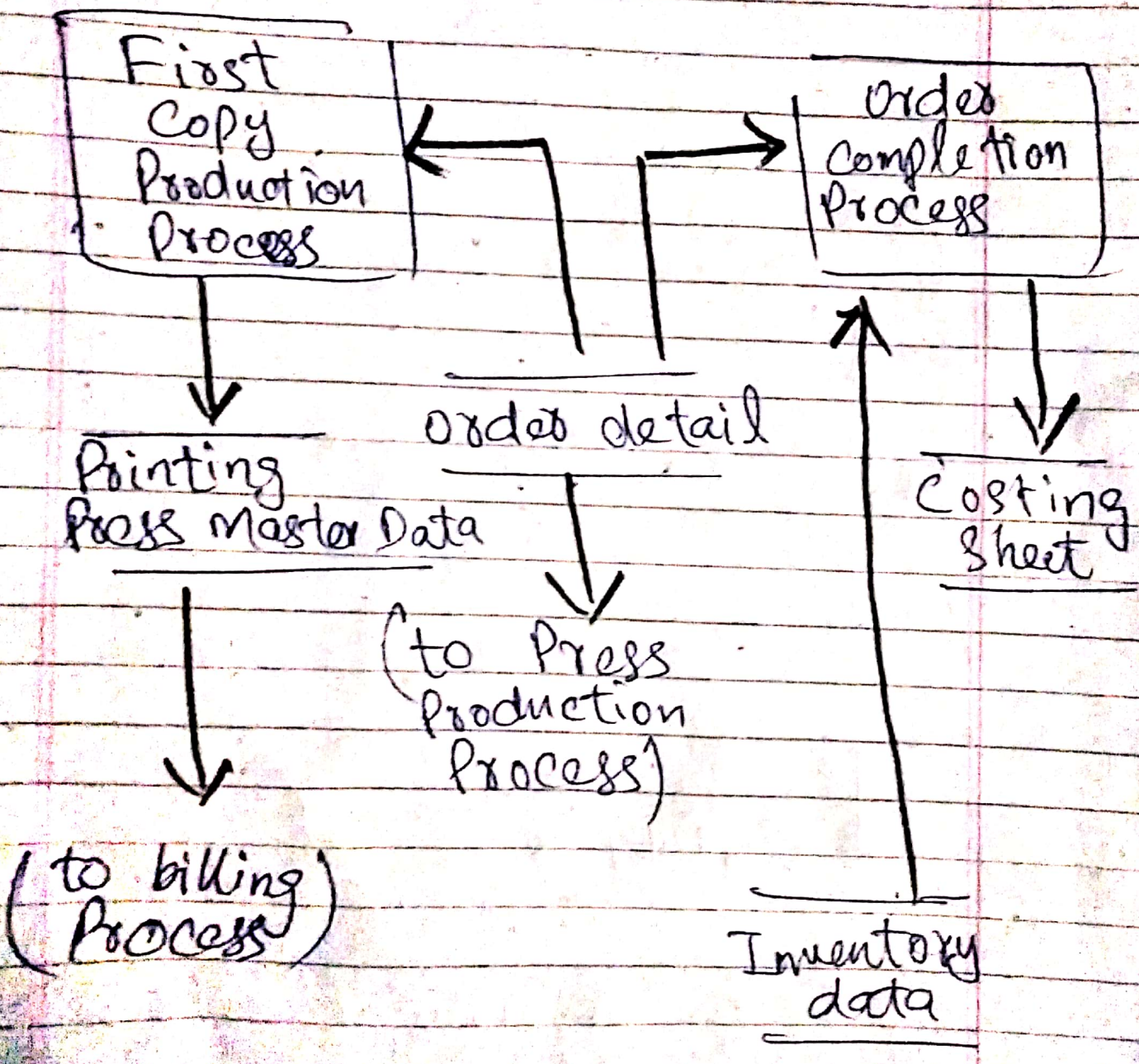
Date : 22:06:20

:Q.1.1:-

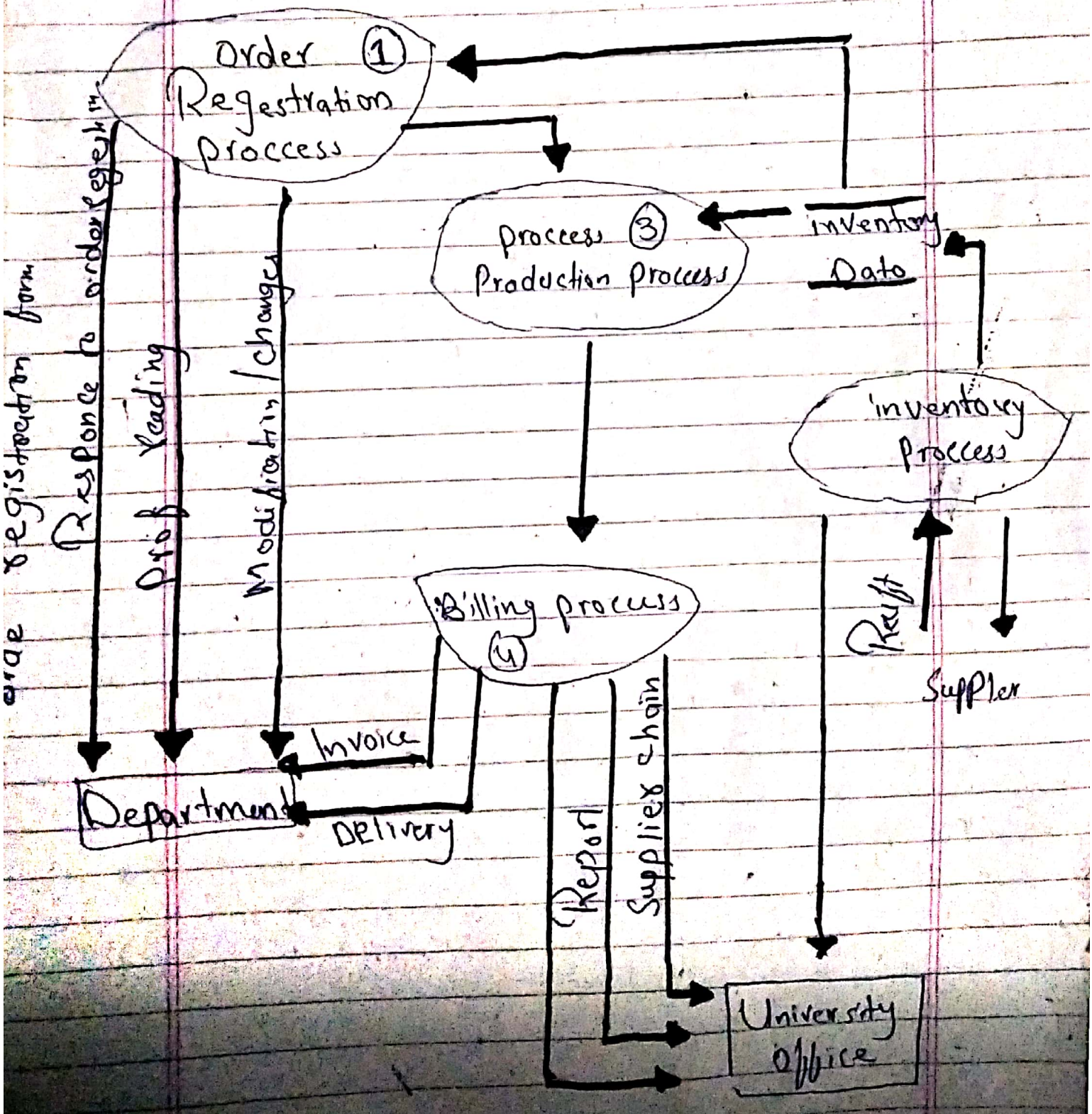

Insufficient Papers
Ask for Ink
Check for Ink/Papers
Staff
Price for different type
Ink
DB
weekly Printing income
Inv
Printing Price
Confirm Payment

:Q No 1:

:Q.1.[redacted]2:



Q :1:
: No 1 .3:


Order Registration Process ①
Process ③ Production process
Billing process ④
'inventory Process
Inventory Data
Prod Reading
Modification / changes
Invoice
Delivery
Report
Suppliers chain
Result
Supplier
University office
Department

Question No : 2

Question No 2.1 :-

Explain why testing Can only detect the Presence of errors, not their absence ?

Answer :-

Testing Can detect Only the presence of errors, not their absence because the main goal of the testing is :

To observe the behavior of the particular Software and to cheak whether it meet its requirement expectation or not.

Testing is a Part of broader Process of Software Varification and Validation it Consist of a Set of octivities ; where the testers try to make the Software behave anomalous in Order to detect

or anomaly to be later for testing. Cannot demonstrate the faults other than Specially in every Circumstance. It is always possible that a test have overlooked Could discover further problem with the System.

Question 2.2

Number 1:-

Unit Testing:-

- The most micro Scale of testing.
- Tests done on Particular functions or Code modules.
- Requires knowledge of the internal program design and

Code.

- Done by Programmers (not by testers)

2 System Testing

- To varify that the System Components perform Control functions.
- To Perform inter-System test
- To domonstrate that the System Perform both functionally and operationally as specified.
- To Perform appropriate type of tests relating to Transaction Flows, Installation Reliability, Regression etc.

Black Box Testing:-

No Knowledge of Internal design of Code required.

Test are based on requirement and functionality

Not based on any Knowledge of internal design or Code Covers all Combined parts of System

Test are data driven (Tests are based on putting some data to cheak the System.

It Uncovers:-

- Incorrect or missing functions
- Interface errors.
- Errors in data structure or external data base access
- Performance errors.

- Initialization and termination errors.

White Box Testing/structural Testing:-

Based on knowledge of internal logic of an application's Code.

Based on Coverage of Code statements, branches paths, conditions.

Tests are logic driven.

It ensures.

- All independent path with in a module have been exercised at least once.
- Exercise all logical decision on their true and False sides.

Execute all loop at their boundaries and with in their operational bounds.

Exercise internal data structure to ensure their validity,

Question No # 3

Question 3.1

Software Maintence:-

Modifying a Program after it has been put into Use.

* The term is mostly Used for changing Custom Software. Generic Software Products are said to evolve to create new versions.

* Maintence does not normally involved major changes to the Systems architecture

* Changes are implemented by modifying existing components and adding new components to the System.

Types of Maintenance:

Maintence to repair Software faults.

- Changing a System to Correct deficiencies in the way meets its requirement

- Maintenance to adapt Software to a ~~difficult~~ different Operating environment.

Changes a System so that it operates in a different environment (Computer OS, etc)

from its intial implementation.

↑Maintence to add or modify the System's functionality.

↑Modifying the System to satisfy new requirement.

Why is it Sometimes difficult to distinguish b/w them?

In Practice there is not a clear-cut distinction between these types of maintenance when the System adapt to new environments then add functionality to take advantage of new environmental feature. Software faults are often exposed because Users Use the system in Unanticipated ways. These types of maintenance are recognized but a different person Sometimes gives them different names.

"Corrective maintence's is Universally Used to refers to maintence or fault repair's

Adaptive maintenance's Sometimes mean's adapting a new envornment and Sometime means adapting the Software to new requirement.

Question No # 3

3.2

System Re-engineering

* Re-structuring or rewriting part or all of a legacy System without changing its functionality.

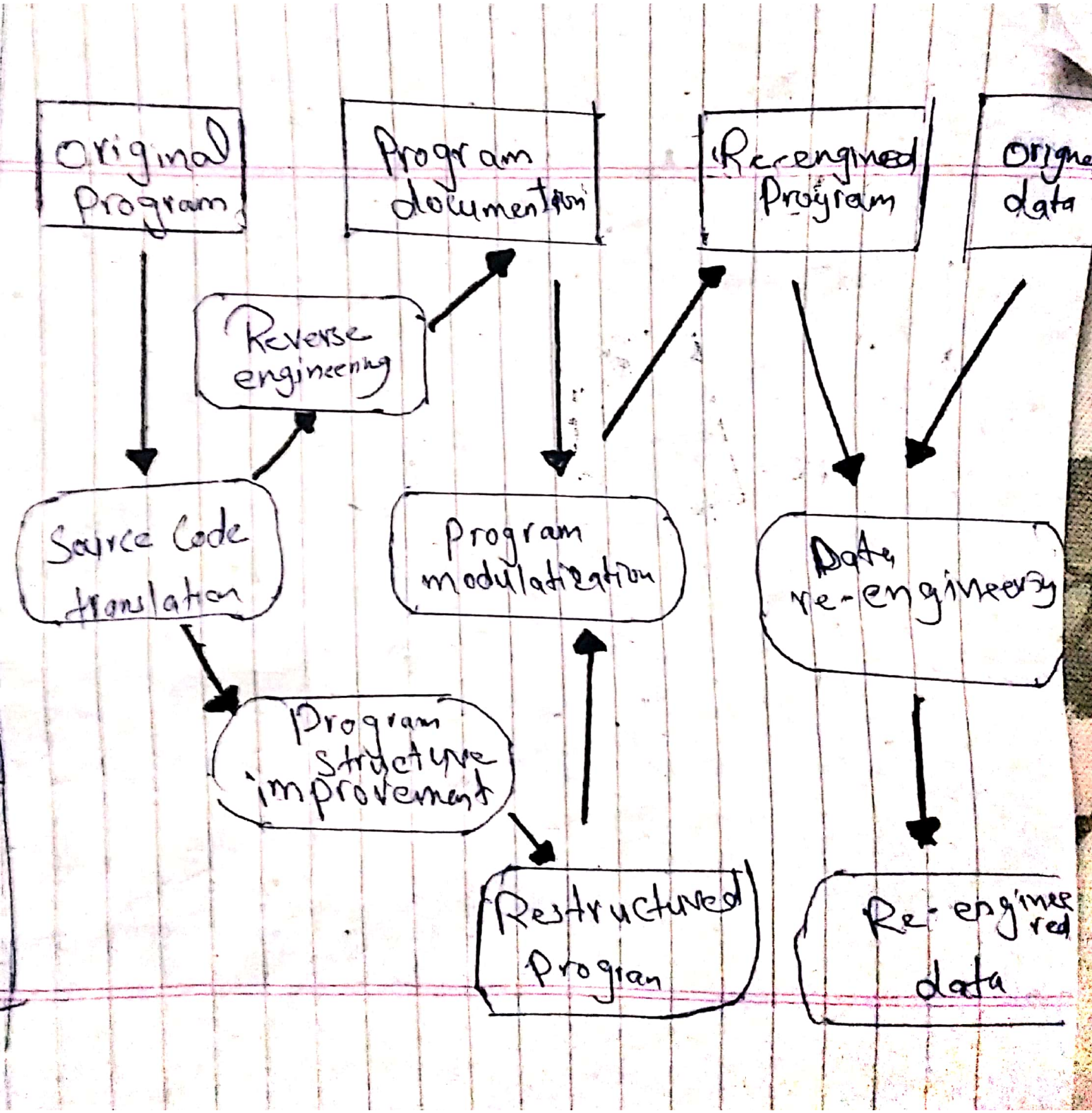
Applicable where some but not all sub. systems of a larger system require frequent maintence.

* Re-engineering involves adding effort to make them easier to maintain. The system may be restructure and re-documented

Re-engineering Cost factors:

* The quality of the software to be reengineered.
* The tools support available for re-engineering.
* The extent of the data Conversion which is required.
* The availability of exped Staff for reengineering

This can be a problem with old systems based on technology that is no longer widely used.


Original Program
Program documentation
Recengined Program
Orign data
Reverse engineering
Source Code translation
Program modulatization
Data re-engineery
Program Structure improvement
Restructured Progran
Re-engined data