Chirag Khatri - 1902076 - CR1 DATE

Assignment - 1

Q) Architectural ~~organisation~~ design - explain in detail each type with an example

→ Architecture serves as a blue print for a system. It provides an abstraction to manage the system complexity & establish a communicat ~~ion~~ mechanism among components. It defines a structured solution to meet all the technical requirements, while optimizing the comme quality attributes like performance & securit

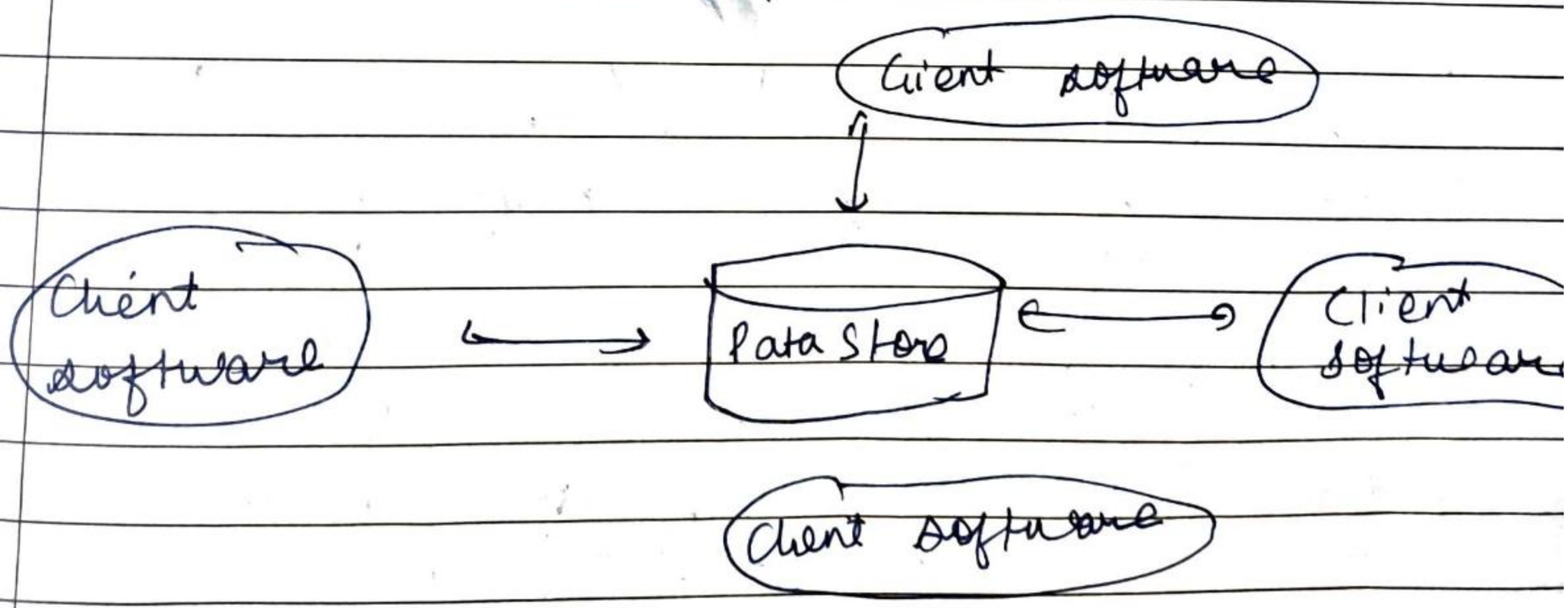
Taxonomy of Architectural Styles.

i) Data centered architectures :-

a) A data store will ~~re~~ reside at the cente of this architecture & is accessed frequentl by the components, that update, add, delet or modify the data present within the st

b) The figure that treats as typical data centred, styles.

c) Data can be passed among clients using blackboard mechanism.



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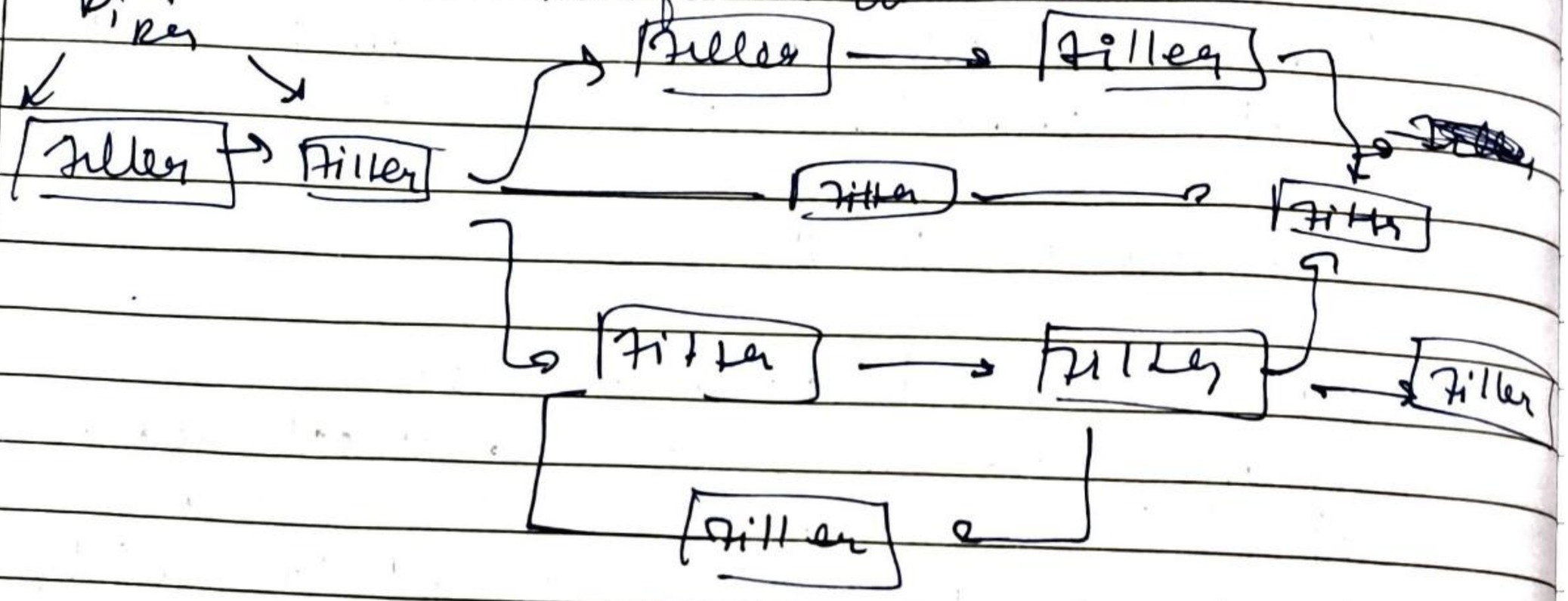
iii) Data flow architectures

a) Pipes are used to transmit data from one component to next

b) The kind of architecture we used when input data to be transform into output data through a series of components.

c) The data flow degenerates into a single line of transform, then it is termed as batch sequential. This structure accepts the batch of data & then applies a series of sequential components to transform it



iii) Call & return architecture

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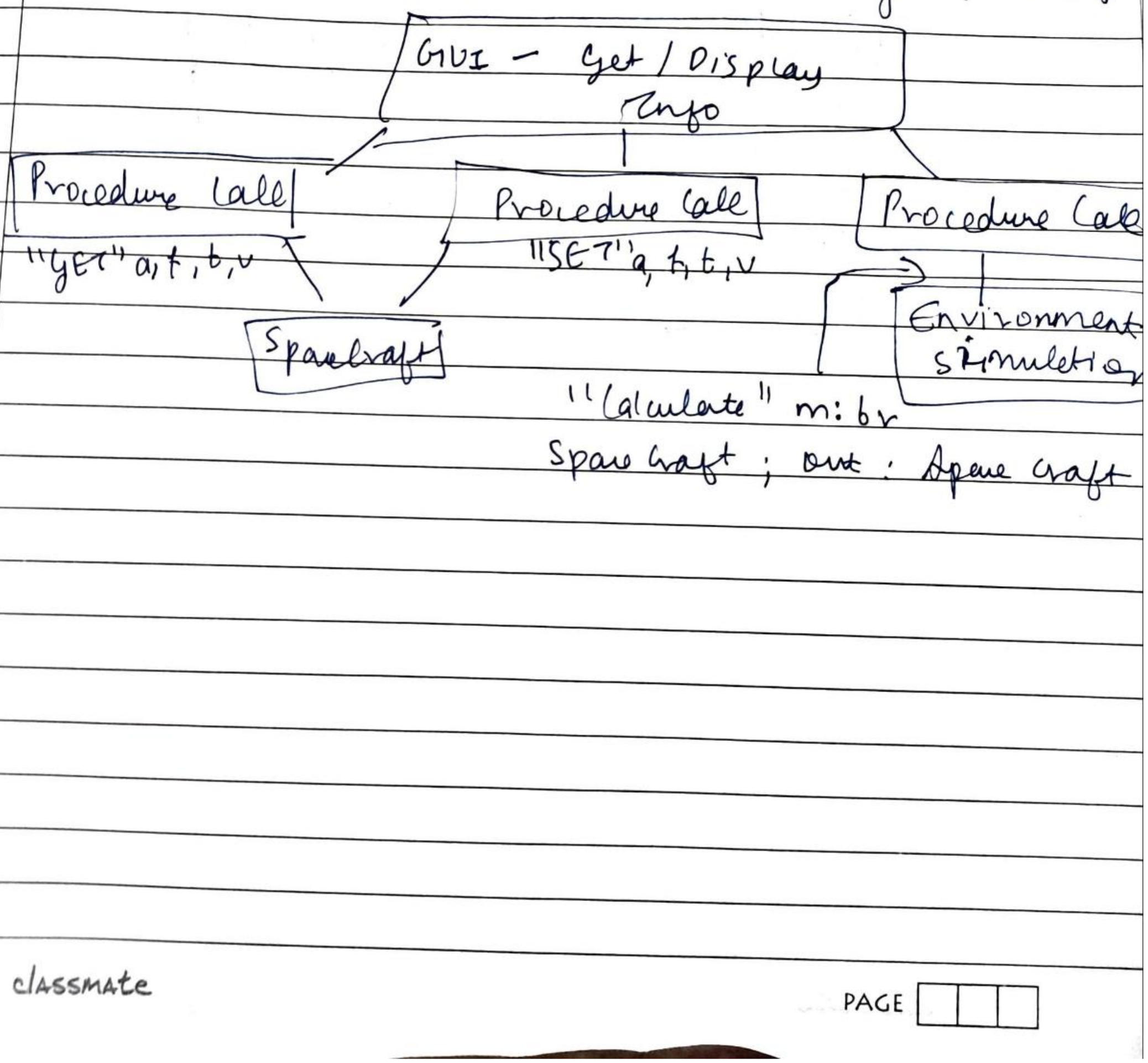
Its used to write a program that is easy to read & modify. Many sub-styles exist within this category.

a) Remote procedure call architecture :- This component is used to present in a main program or sub-program architecture distributed among multiple computers on a network.

b) Main program or subprogram :- The main Program structure decomposes into subprograms which can invoke other sub-components

iv) Object oriented architecture :- The components of a system encapsulate data & operations that must be applied to manipulate the data. The coordination & communication between the components are established via message passing



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v) Layered Architecture

a) A no. of different layers are defined with each layer performing a well-defined set of operations.

b) At the outer layer, components will receive the user interface operations & at the inner layers, components will perform the operating system interfaces

c) Intermediate layers to utility services & application software functions