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Q1. What is importance of object orientation? Discuss difference between traditional approaches & OO approach to software development.

→ Object orientation has been a next great advance In software engineering. It addresses the fundamental issues of software modification, adaptations and evolution

It promises to reduce development time, reduce the time & resources required to maintain existing applications, increase code reuse & provide a competitive advantage for organizations and that use it.

Difference -

Traditional Method	Object Oriented Method
1) Use procedural Programming	1) Uses object oriented programming
2) No data hiding	2) Encapsulation is used to hide the data.
3) Top down approach	3) Bottom up approach.

Q2. What is Unified approach to software modelling? what is UML? Explain conceptual model of UML.

→ The unified approach (UA) is a methodology for software development that is proposed by the author Ali Bahrami (1999)

UA resolves around following points
- Object Oriented Analysis
- Object Oriented design
- Testing
- Developing & prototyping

UML

Acronym for Unified Modelling Language

UML is a visual modelling language used for design and modelling of software system with object oriented methodology.

The software system can be best modelled with the help of UML.

Conceptual Model of UML

1) Building block of UML
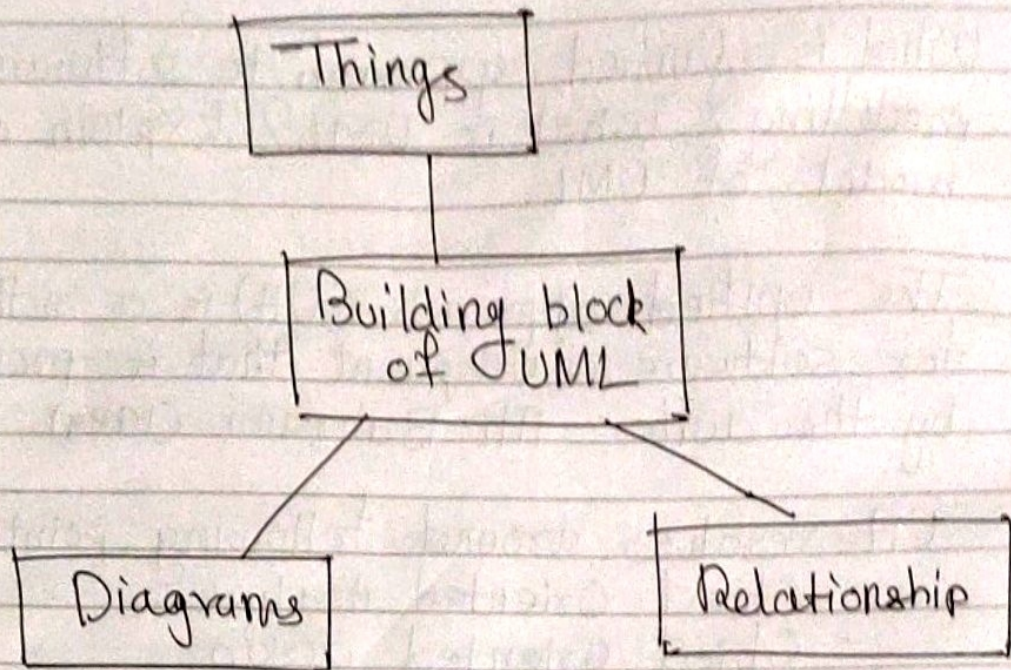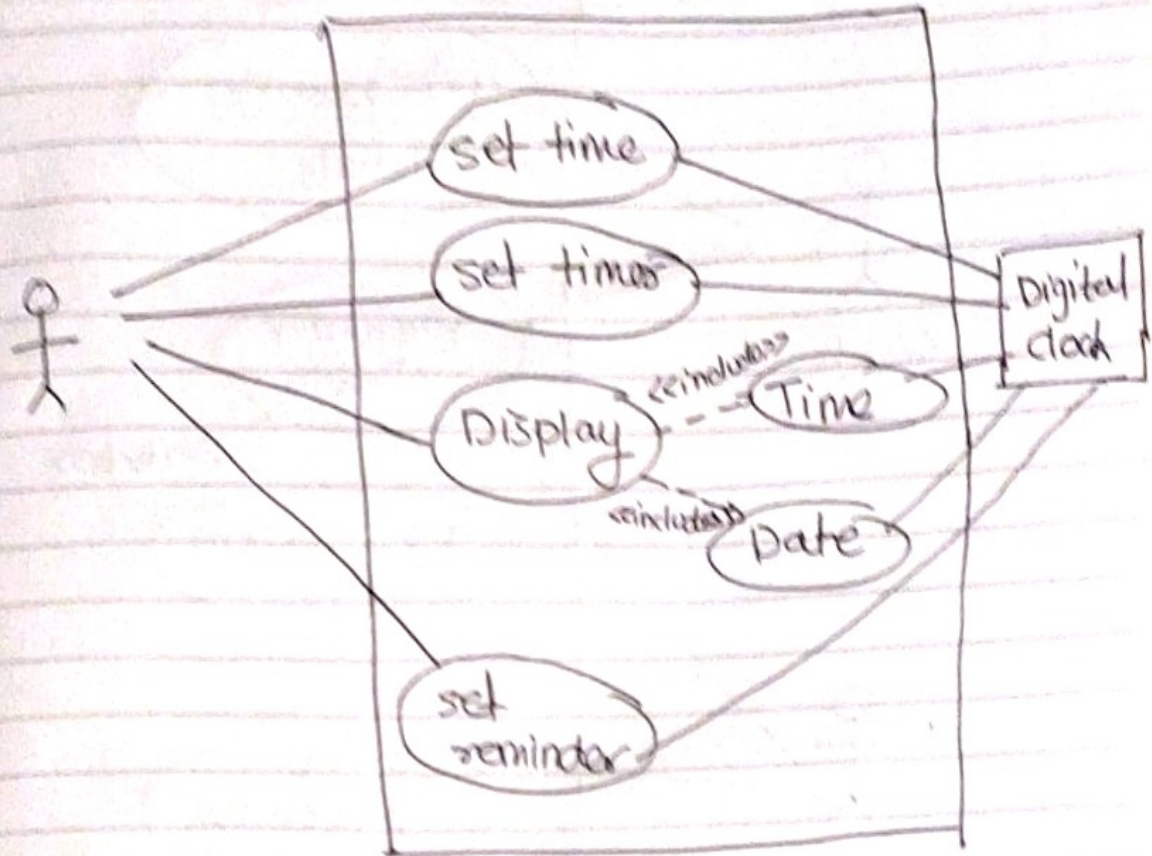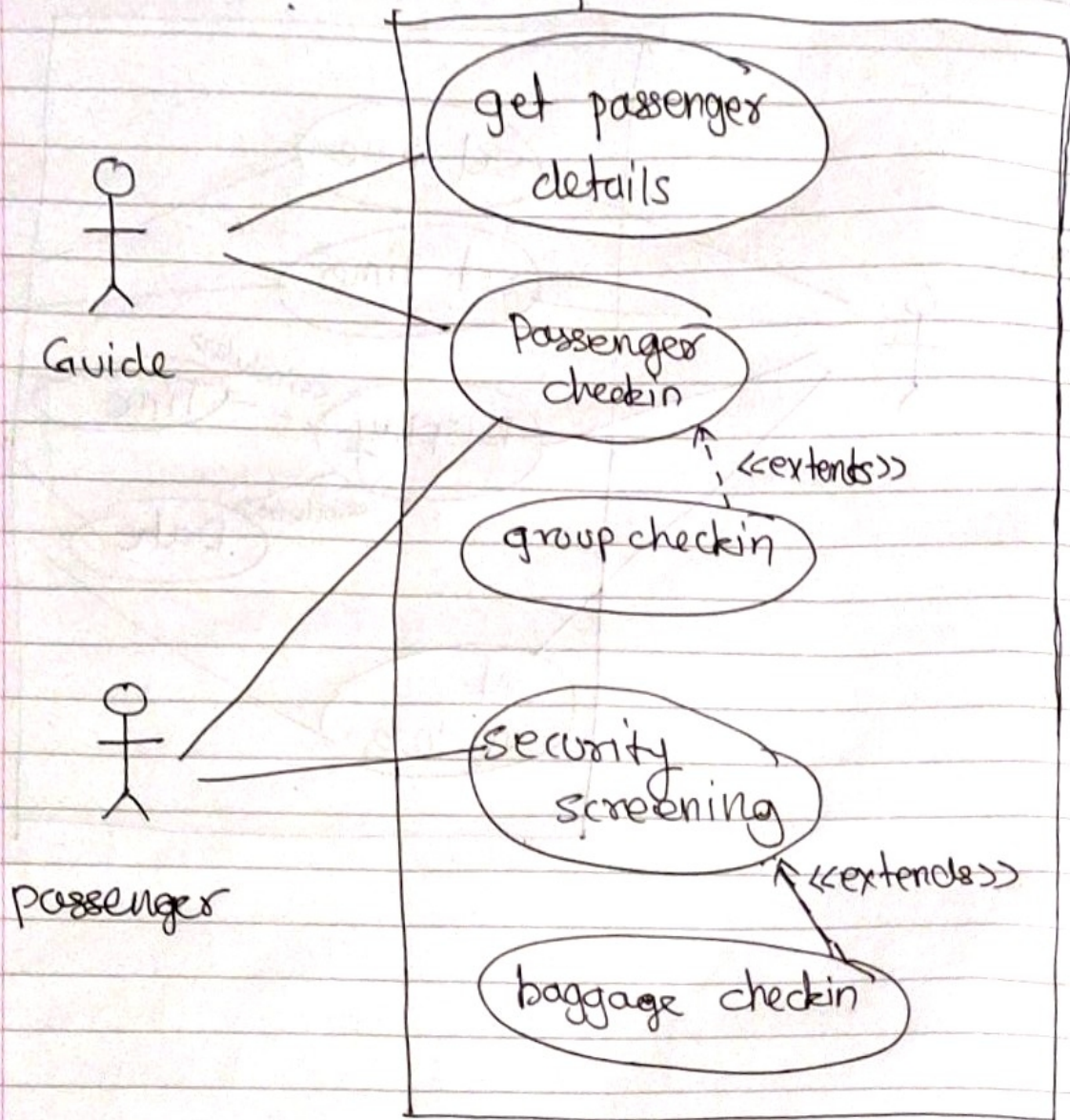2) Common UML mechanism
3) UML architecture

Q3

```
                 ┌──────────────┐
                 │    Things    │
                 └──────┬───────┘
                        │
              ┌─────────────────────┐
              │  Building block     │
              │    of UML           │
              └─────────────────────┘
              /                    \
   ┌──────────────┐          ┌──────────────┐
   │   Diagrams   │          │ Relationship │
   └──────────────┘          └──────────────┘
```

Fig. Building block of UML

Use case for digital watch.

Use case : Airport check in

Actors:
- Guide
- Passenger

Use cases:
- get passenger details
- Passenger checkin
- group checkin <<extends>>
- security screening
- baggage checkin <<extends>>

Use case Airport boarding System.