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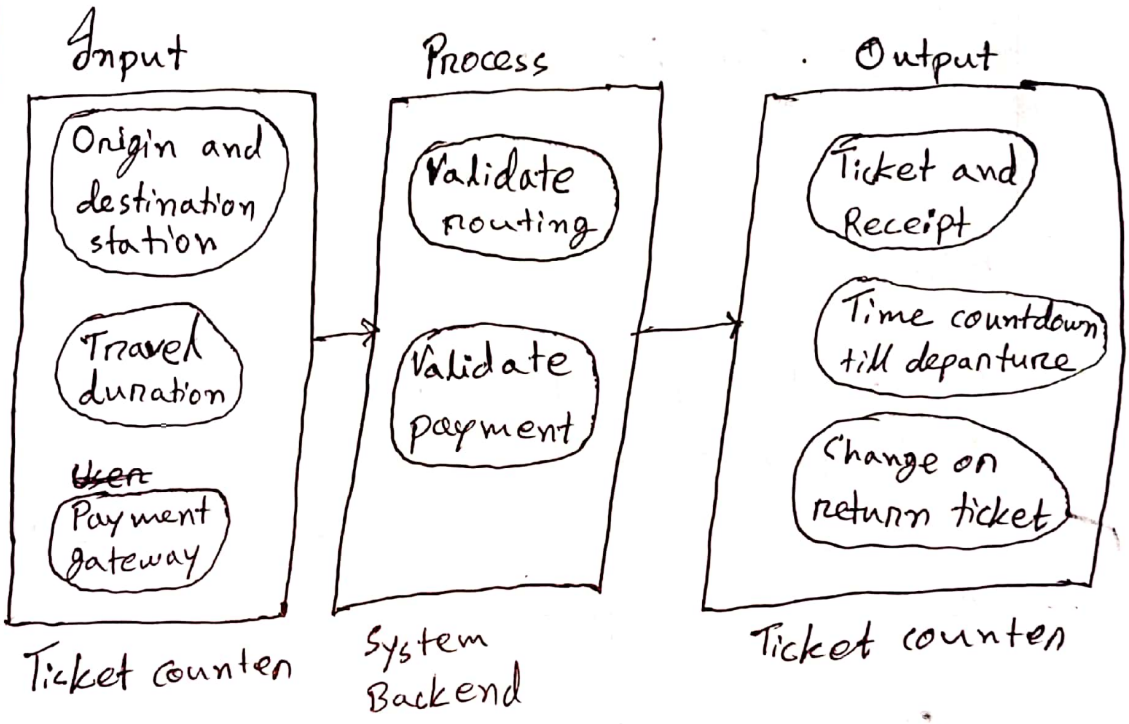
Ansween to the Q. NO. 1

#a

An automated ticked-issueing system used by passengers at a railway station given below.



In this system passengers will have ~~tickets~~ to select their origin & destination station. Then they will select the time they want to travel. After giving those inputs the system will ask to choose a ~~pen~~ payment method. Then in the ~~ba~~ backend route, timing and payment gateway will be validated. If a ticket is available for the customer for that time then payment will be confirmed.

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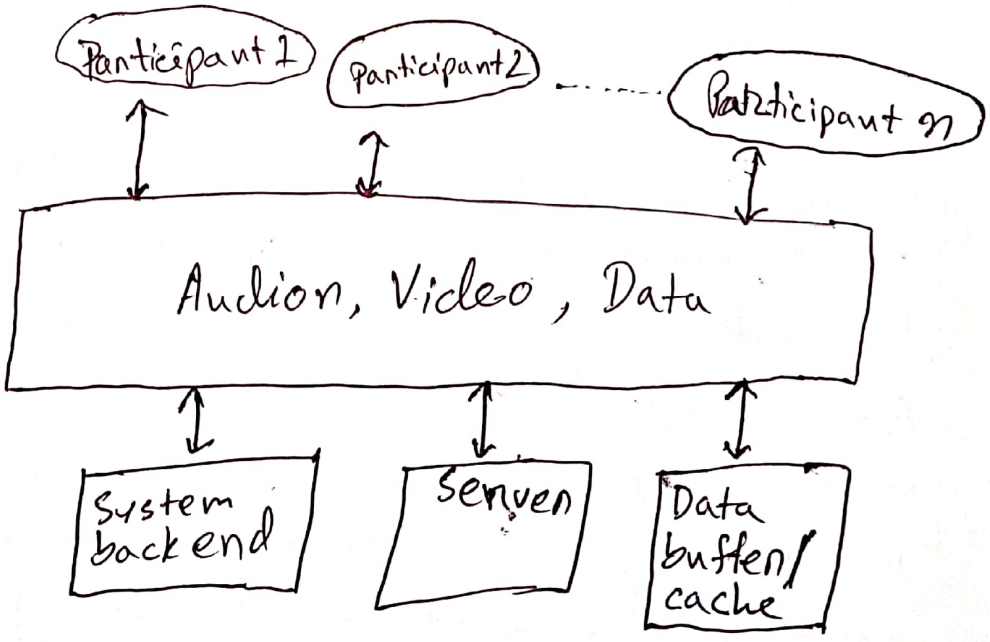
and ~~set~~ then the passenger will get the ticket & receipt. Otherwise the passenger may have to check for another time slot to travel ~~on~~ on if there's problem in payment method he may have to ~~upd~~ change the method. Upon receiving the ticket the customer can keep track of departure time or he/she can return on change the ticket.

#b/

A computer controlled video conferencing system that allows video, audio & computer data to be visible to several participants at the same time is given below:



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This is a computer controlled conferencing system where participants will be able to share their audio, video and data. The system will work like there would be a backend system ~~wit~~ which will be responsible for connecting all the participant, maintaining stable conferencing and data sharing. A server system will be responsible for hosting the conference and keep record. Then there would be a data buffer system. As it's an online conference so a buffer is needed to share files or their video/ audio or messages. Due to this they will have a flawless working system.

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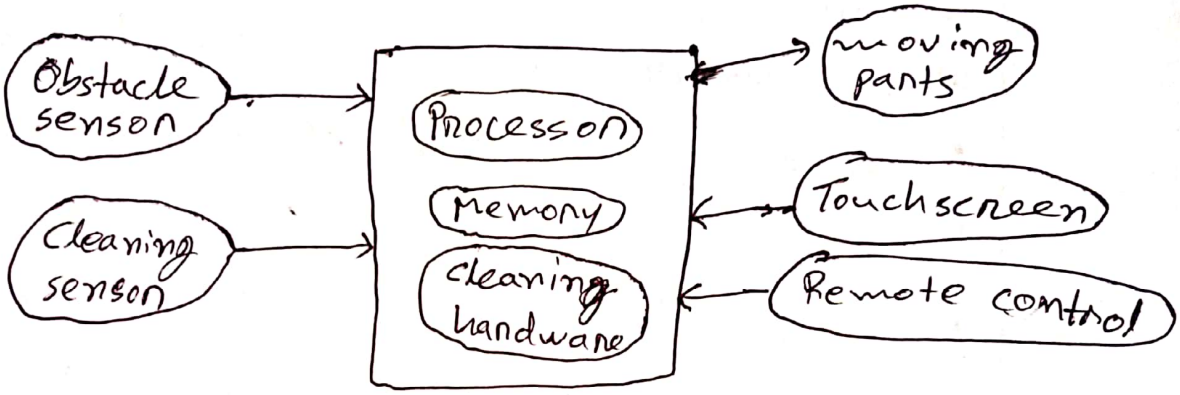
#c)

A robot floor cleaner system given below.



This robot will have processon to process all the data and instruction it will get. It will have a memory to remember user settings on cleaning instruction. Also will have cleaning hardwan to properly clean ~~clea~~ clean spaces like ~~coors~~ corridors. It will have moving pants so that it can move and clean. It will use a touch screen on remote control to get user instruction. It will have obstacle senson to avoid obstacles ~~and~~ and also will have a cleaning senson to detect more dirty areas and thus to take necessary steps to clean it.

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#d)

Automated gas station ~~sty~~ system given below:

Object	Attributes	Operations
Pump	→fuel dispensen →Price meten →Hose status. →Fuel ~~status~~ type	→Provide fuel →Show price →Show if hose is available →To select type of fuel
Card readen	→Card reading machine →Card status →Printer	→Read the card →Check if it's active and has money →Print receipt
System Controller	→Chipset →Paymet gateway →Secunity →Database	→Process all the data →Process paymet →Provide secunity to the system →keep track of transaction, price to fuel ~~ratio~~ ratio, fuel inventory.

Gras ~~pu~~ filling station has pumps. Pumps have credit card readen. Driven are able to swipe ~~th~~ their

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cards. Those card readers confirm payment then the driver can get the fuel. Hose becomes active after payment. Then drivers can ~~pay~~ pump fuel through the hose and also can select ~~whi~~ which type of fuel they want.

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Answer to the Q. NO. 2

A client server architecture would be great for the given scenario. I would design an interactive client server system. As each dealer will use this client server based simulation system in different ways so it must be immersive. The system will work like there would be a server end where all the background processing will happen and the data would be stored. And there would be an interactive client side application where dealers can request for various data. The data would be retreived from the server and would be shown in an imensive dashboard in the client app. In the app they can also simulate privous prices and future stock price prediction. The prediction system will be based on facebook's prophet algorithm.

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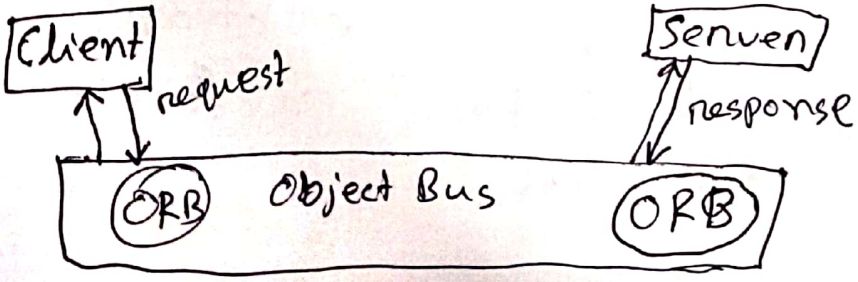
Answer to the Q. No. 3

Object Request Broken (ORB) acts like an interface between client & server. The drawback of client-server architecture is, the server can only response to it's limit. Meanin that if there an "N" port in server then only "N" client can connect and get service from server. Other clients may have to wait for the server to be free for new connection. So for a distributed scalable client-server architecture this will cause huge problem. This is where ORB comes to rescue. ORB acts like interface where many clients can create an object of it and can connect to server. Each client has it's own ORB object. It was developed for distributed systems. So unlimited client objects can connect to unlimited server object of ORB.



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Answer to the Q. No. 4

General role of standardization:

→ Standardization helps to build focus, cohesion and critical mass in the emerging stages of technologies and markets.

→ Standardization helps to ~~clarify~~ codify and diffuse state of the art science and technology and best practice.

→ Standards for measurements and tests helps innovative companies to demonstrate to the customer that their innovative products possess the features the claim to have, but also acceptable levels of risks for health, safety and the environment.

→ Open standardization processes and standards enable a competition between and within technologies and contribute therefore to innovation-led growth.

→ Standards not only reduce the time to ~~mark~~ market inventions and innovative technologies but in the first place allow their marketing by creating critical masses on collecting the support of all relavant stakeholders.

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