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CSE 470 (ZWB)

Ans to Q 1 (A)

The ideal development method to work according the scenario will be scrum of agaile philosophy. Reasons are given below:

1. Since requirements may change in the middle of project, scrum would be a good choice since it works based on sprints where each sprint has seperate sprint backlog of tasks needed to be done.

2. Since Sundar Pichai is desperate to have a result as soon possible using scrum they can have a working deliverable quickly as it delivers deliverables on every sprint.

3. Since scrum supports diverse team members, θ can hein diverse people of diffrent specialities to work in my team.

Ans to or no B

As a team lead i would like to maintain a burndown chart to keep track of progress of my project. A burndown chart is a graphical representation of the tasks that has been done and left to do with respect to the time. Moreover, i'll call sprint meeting everyday to discuss the progress of work with my team members which will give me up to update everyday.

Again there is sprints after each sprint. by doing sprint review i can track progress of my project.

Ans to Q no C

Since for the longevity of the product codebase has to be well documented. I'll use waterfall model. Waterfall model is a linear sequential model and it is well documented. Also I would like to keep scrum at the same time combining with waterfall. After each sprint I can have my team document the progress of project. In waterfall even though it is well documented, the requirements are fixed and not changable so I would like to combine scrum with it.

Ans to or 1(D)

functional requirements are those served by the system. Here b are the functional requirements.

1. Sending text messages to users.

2. Attaching attachments and send to other users

3. Sending images or voice texts

4. should support real time collaboration.

Non functional requirements are the constrains of system.

1. performance: System should be responsive and handel large data.

2. Scalability: later more people should be accomodable by the system.

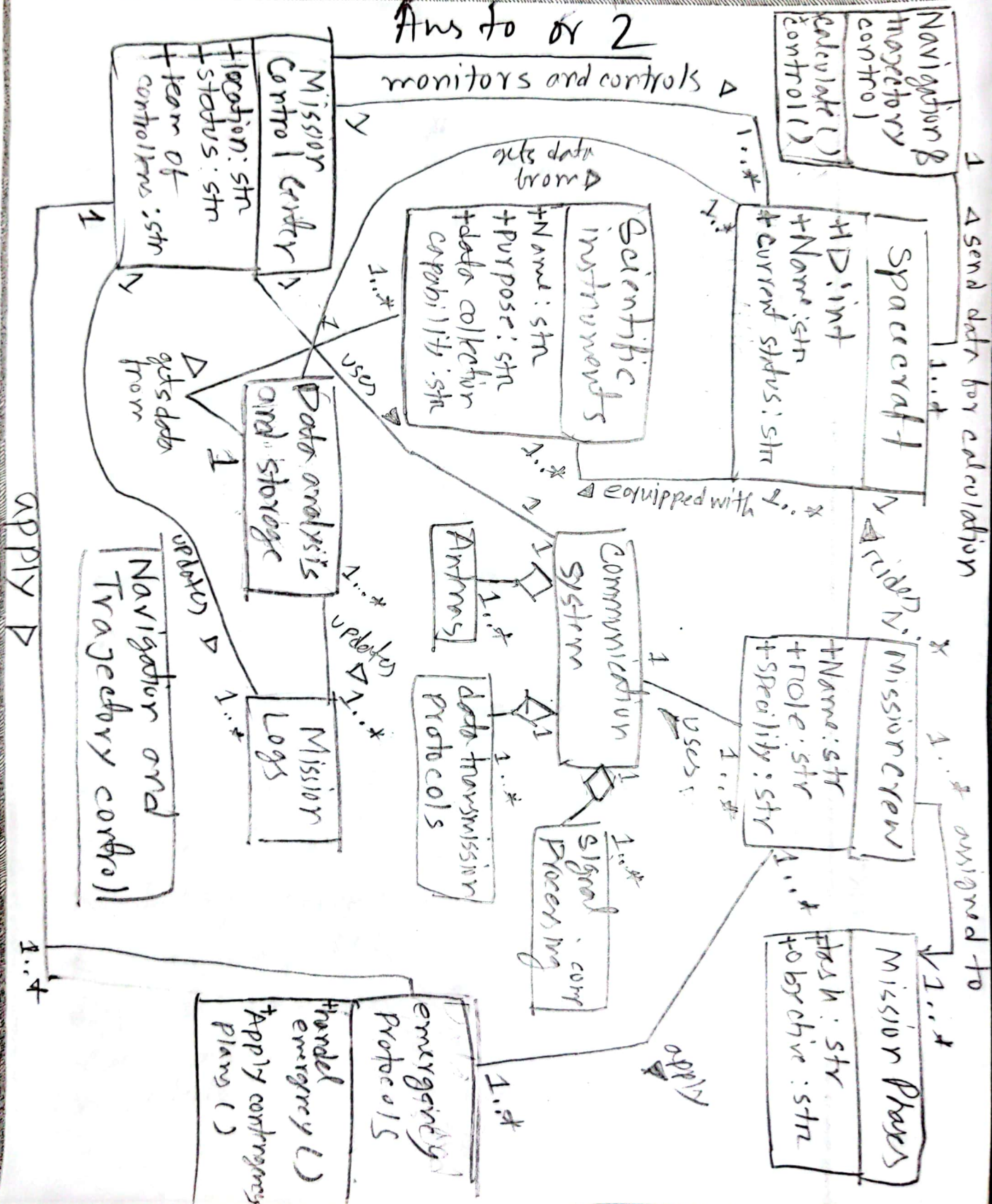3. security: should ensure user security and privacy of data.

Ans to or 2

monitors and controls ▷

Mission Control Center
+ location : str
+ status : str
+ team of controllers : str

Navigation & trajectory control
Calculate ()
control ()

◁ send data for calculation

Spacecraft
+ ID : int
+ Name : str
+ current status : str

gets data from ▷

Scientific instruments
+ Name : str
+ Purpose : str
+ data collection capability : str

◁ equipped with 1..*

◁ rides in   Mission crew

Mission crew
+ Name : str
+ role : str
+ specialty : str

assigned to ▷

Mission Phases
+ task : str
+ objective : str

◁ uses

◁ used

gets data from ▷

Data analysis and storage

updated ▷

Navigation and Trajectory control

updated ▷

Mission Logs

APPLY ▷

Communication System

Antenna

data transmission protocols

signal processing

apply ▷

emergency protocols
+ Handle emergency ()
+ Apply contingency plans ()

Ans to or 3 (A)

The software pattern I'll use is client - server pattern. Because here a server is required to process this remote real time gameplay.

Advantage : Server can be accessed across a network.

Disadvantage : The performance depends on network. Since diffrent organization can own the servers sometimes it's not trustable.

Ans to 3 (B)

Monolothic software architecture is sequential and not capable of handeling complex projects like this one for example, this project might need diffrunt components independent of each other to develop proprnly but monolothic architecture makes it all connected so it becomes single point failure.