

Question	Answer	Answer 2
Could you offer more details on the patient monitoring device's functionality, particularly whether it can automatically send data, or if manual data retrieval is necessary?	The device automatically sends data, configurable depending on what types of thresholds exist for that type of monitor (see the details on cadence for each monitor reading depending on the type)	Data is always sent automatically to the software system through automated feeds via a proprietary socket protocol (you don't need to worry about that part, just that you have a component or service that connects to the device).
Please provide insight into how MonitorThem functions, and if it is adaptable for scenarios such as "trend and threshold analysis based on patient consciousness. For instance, it would be beneficial if the system recognized when a patient is sleeping and modified alert settings, especially if there's a drop in blood pressure or a change in respiration and heart rate."	MonitorThem is an integration point from the perspective of MonitorMe, and has no behavior responsible based on the stated requirements. MonitorMe must handle trend and threshold and all other details stated in the requirements.	MonitorThem is ONLY used to assess hospitals and do trend analysis, so that cloud-based system does not interface with the devices - the MonitorMe software should only make analytical data available via a secure HTTP API.
Could you explain the rationale behind the 500-patient capacity per instance in MonitorME?	It is a business decision that you must design for. The parent company surveyed hospital sizes worldwide and determined that the number of hospitals this size was the best market for them.	
Is it possible that this 'instance' might be a cluster of servers or databases?	These are implementation details that must be part of your design. If there are trade-offs, you must evaluate them and reach a decision. "Instance" in this description describes a business concept, not a technical requirement—each hospital will have an instance of MonitorMe.	
Also, is it mandatory to adhere to the 500-patient maximum per instance, or can we scale the capacity both horizontally and vertically?	Yes, it is—we're not interested in a solution that is over-engineered. We don't need that capability because our business doesn't want to deal with hospitals of that size.	
Furthermore, is there a hospital use case that requires multiple instances as opposed to a single instance?	Unless you can demonstrate that this will not add complexity to the solution or affect the time it takes to implement it—we aren't in any markets that would require this.	To scale, we would need multiple comprehensive systems in place. However, in the future we may want to increase this constraint
In the description, it is mentioned that StayHealthy produces the hardware (sensors). Could we assume that the communication protocol between the sensor and the gateway is not a concern, or should we also focus on that aspect?	The protocol is not a concern. Do not focus on that part, just assume that you can connect to the device and receive the feed.	
Does StayHealthy also produce the sensor gateways that unify the output?	No, that's a function of the MonitorMe system	
What types of protocols are used by these devices? Is MQTT utilized, or are there any other specified protocols?	Don't worry about the protocols for the architectural aspect of the system	
Should we consider that the patient is only monitored inside the hospital?	Yes. Only inside the hospital	
Is it possible to monitor patients outside the hospital, for example, from their homes?	No.	
Should patients be able to move around the entire hospital or outside with the sensors?	No. The devices are only available within the hospital rooms and the bed	

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Should we assume that MonitorMe requires its own patient database, or can we integrate data from the MyMedicalData app?	MonitorMe has its own database and only provides feeds to the SAAS products they offer	
The nurse module is expected to visualize patient data. Should we include the patient's personal information such as name, surname, age, and sex, or is it preferable from a security perspective to display identifiers like room number and bed number?	That information can be displayed	
How do vital signs (patient monitoring devices) work? Can we request the communication protocol (e.g. over the network), or is it fixed and provided from the vendor (which protocol in this case)?	Don't worry about the protocols for the architectural aspect of the system	
Does each patient monitoring device transmit one value each time, or is it a list of values with timestamps, or can it be a list of different parameters with their timestamps?	One value at a time is streamed from each device	
Can we assume that each set of monitoring devices is attached to the hospital bed? Or can patients move around the hospital with some of the devices?	Yes, it is only for the hospital room/bed	
Can we use MonitorThem system to store the gathered monitoring data? From both technical and privacy point of view (as it is cloud based SAAS product).	Yes.	
What does the parameter "average response time" mean (for consolidated monitoring screen)? Does it specify how the displayed data should be up-to-date?	We expect some variability in the network, so the AVERAGE should be one second.	
Should we consider that doctor consoles exist in the hospitals?	No, only the smartphone alert.	
From which devices can medical snapshots be created - from mobile apps / nurse stations / doctor consoles?	Nurses stations only	
Can medical personal create snapshots for any patients of the hospital, or only for the patients that are assigned to the current user?	Only for those within the scope of the nurses station (20 patients)	
When staff uploads the patient snapshot to MyMedicalData - are there specified security requirements to connect to that system?	assume a secure and encrypted socket connection	
Do we need to store patient data in MonitorMe system? Or we should integrate with another system (e.g. MyMedicalData or Hospital Registry)?	ALL raw data from ALL monitoring devices is stored in the MonitorMe system	
Is StayHeathy mobile app also developed as a part of MonitorMe product?	Yes, but for purposes of this Kata assume that will be developed by another team	
Is our understanding correct, that StayHealthy wants to make MonitorMe which is not aligned with government Regulations (e.g. HIPAA)? Can it be a mistake in the "Other Considerations" section or a misunderstanding?	No regulatory requirements regarding data privacy exist within MonitorMe	
Requirement related to holistic snapshots to be sent to MyMedicalData from MonitorMe: it was unclear to us if snapshots need to occur in realtime from the monitoring screens (based on the data that is on display at the monitoring screen at the time) Or can they be based on the medical professional filtering vitals data previously captured (filtering on time and vital sign)? Or both?	From the monitoring screens	

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Other consideration related to adding more vital sign monitoring devices for MonitorMe in the future: Do we see a future where real time imaging (or other types of devices that capture large amounts of data in a short time period, ie, medical imaging, ultrasounds, infrared cameras, etc.) would be a consideration for vitals capture or are we good creating an assumption that the data will be limited to data payloads the size of our current vitals devices?	Sure, that may be a possibility.	
Want to understand more about MonitorThem and MyMedicalData product documentation, features, capabilities. What assumptions can we make about these products?	No assumptions other than high availability and a secure HTTP API for data uploads	
Should we design communication protocols for monitoring devices or can we assume there is an adapter that they can communicate via TCP/IP etc.?	No, this is architecture. Just assume a secure socket-level protocol	
Can MonitorMe connect to MonitorThem product and reuse its analytics capabilities?	No. Upload only.	
Can we assume the monitoring devices are mature to connect via REST API or IOT? or is this part of our architecture design?	No, just assume a "proprietary socket level connectuon that is secure	
Do the monitoring devices send the current reading, only, or do they send all the readings they have taken over since the last transmitted interval?	Current readings only	
Should we take into consideration how the 20 patients will be configured / assigned to a nurses' station?	No.	
Should the view of aggregated / historical data be limited to a single instance of MonitorMe (i.e., a single instance, with maximum of 500 patients), or allow for multiple instances of MonitorMe (e.g., 3 instances, for a total of 1500 patients)?	Yes.	
Does MonitorMe need to be able to configure vital sign thresholds for each individual patient, or does it use a single configuration of vital sign thresholds for all patients (e.g., unique blood pressure per patient, or single configuration for all patients)?	Threshold configuration is global only (for all patients) and is by device	
What capabilities can we expect the IoT devices (vital sign monitors) to have? Would they connect to a gateway, or can there be multiple hubs receiving the vital sign data?	The only thing you need to worry about is that the monitoring devices sent data points through a secure socket-level connection to the software	
Where does the information for patient and sensor connection come from. Could we assume that this information is available in MymedicalData record system.	That's a safe assumption.	
How do we know who is the patient. Patient identification.	Assume that the patient has an identifier that respects patient privacy.	
Does each ECG message include one value or a combination of values that are collected in that duration.	Not needed for this challenge	
Are we dealing with different type of users and with different roles.	Yes	
Where are the threshold values stored and are they per patient?	Yes and values descried in the kata description	
We are assuming that the nurse station and mobile app is connected to the same building network (wifi)?	That's for you to decide with your solution	
We assume that each sensor is able to establish its own network connectivity.	That's for you to decide with your solution	

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We assume sensors have some basic authentication mechanism	That's for you to decide with your solution	
How these devices can be tagged to each patient. Possibly some kind of Mapping needs to be between each patient and device, and who will be configuring that, and from which UI.	Assume that the patient has an identifier that respects patient privacy.	
What is the role of MonitorThem, do we need to connect to that system somehow. (Not requested in requirements though)	Just another product the company produces, they do not integrate.	
Any assumptions on the number of medical professionals using the system?	Depends on the complexity of the patient.	
The description of MonitorThem is not totally clear to us. Is that SaaS supposed to/capable of doing the analysis of vital signs in order to decide if an alert must be raised?	Yes	
Is usual requirements like a user management component, authentication etc. of interest or can these management related stuff be skipped?	You should consider them.	
Which vital signs are dependent on whether the patient is awake or asleep? Is it limited to blood pressure, respiration rate, and heart rate -OR- are these examples and others should be considered?	Use the examples given in the kata documentation.	
We found that a sleep / Awake sensor is a complex type of sensor using the other metrics to define patient state. Is that something we should take in consideration or we just have to consider that it is single input sensor with asleep / awake binary response.	Single input sensor	
Regarding the periodicity in collecting data, MonitorMe can deal with no relevant data (Low Heart rate value, ...) received earlier than Sleep/Awake status. Can you please confirm that the system should be able to manage that ?		
What is the effective difference between Health professional and Medical Staff ?	This does not matter for the challenge.	
Is the StayHealthy Inc Mobile application an open product connected with public cloud ? available for all health professionals ?	This is for you to decide as you work on the solution	
<p>We're not sure how to treat these two potentially a bit exclusive requirements:</p> <p>"For each vital sign, MonitorMe must record and store the past 24 hours of all vital sign readings. A medical professional can review this history, filtering on time range as well as vital sign."</p> <p>"Medical staff can generate holistic snapshots from a patients consolidated vital signs at any time. Medical staff can then upload the patient snapshot to MyMedicalData."</p> <p>We're assuming that what is expected to be uploaded to MyMedicalData would often cover the period much longer than 24 hours—perhaps it should cover the full length of patient's time at the hospital, which can be weeks if not months. Is this a correct assumption?</p>	Make the assumption that you think makes the most sense and make a case for it's value.	
Do you expect MonitorMe to integrate with or utilize MonitorThem in any way?	It should upload to MonitorThem only.	

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Is there 1 monitoring device per patient or per vital sign type? As in, does MonitorMe need to integrate with 1 device per patient which provides all the vital sign data, or does MonitorMe need to integrate with 8+ independent devices based on which vitals are being monitored?	Multiple devices	
Are the patient monitoring devices part of StayHealthy's comprehensive hardware and software solution for the MonitorMe system, or are they provided separately by the hospital for connection to MonitorMe?	Do not focus on that part, just assume that you can connect to the device and receive the feed.	
Do the patient monitoring devices transmit data in a specific format?	Data is always sent automatically to the software system through automated feeds via a proprietary socket protocol (you don't need to worry about that part, just that you have a component or service that connects to the device).	
Is the consolidated monitoring screen already installed in each nurses station as part of the MyMedicalData product, or will it be a new hardware addition for MonitorMe?	No, the hardware will already be there	
Are there any other requirements or constraints regarding the hardware used in StayHealthy products?	Use the information in the kata description	