

Grading Rules

1. Recall Questions

Q8. What types of users does the Fitness Paradise expect? (0 / 0.5 / 1 pt)

- Individual(s) (or single people or single member(s) or person(s)) 0.5 pt and club(s) (or company(s) or organization(s) or group(s) or club members) 0.5 pt.
- Private user is not fine.
- Member is not fine.
- Wrong/different guess has no value.

Q9. From which class the ActivityView is updated? (0/1 pt)

- ActivityController (1 point)
- Everything else (0 point)

Q10. Which class/classes is/are directly used by BookingController? (can be more than one) (0..1 pt)

- Booking, Activity and Facility. (1 point)
- Rule (0.33 for each one correct and -0.16 for each other class that is wrong)
- Max is 1 point and Min is 0 points (can be decimal).

Q11. Please choose the right statements (more than one statement can be right). (0 / 0.25 / 0.5 / 0.75 / 1 point)

- One gym consists of 1 or many machines & one invoice is related to one booking. (0.5 + 0.5)
- Rule (0.5 for each one correct. For each one wrong -0.25)
- Max is 1 point and Min is 0 points (can be decimal).

Q12. Where are the data on the performance of the member fetched from? (0/1 pt)

- FitnessBand (1 point)
- Other (0 point)

Q13. What performance data can the members share/exchange with others? (0..1 pt)

- Distance, Time and (Burned) calories.
- Redundant: Saying only calories is fine.
- Saying also week and month aggregates does not add any points.
- Rule (0.33 for each one correct and -0.16 for each other one that is wrong)
- Max is 1 point and Min is 0 points (can be decimal).

Q14. Which class is responsible for sending the invoice? (0/1 pt)

- BookingController (1 point)
- Other (0 point)

Q15. Which class contains information on the schedule of the activities? (0/1pt)

- Schedule (1 point)
- Other (0 point)

Q16. Which class is responsible of managing the payment? (0/1 pt)

- BookingController (1 point)
- Other (0 point)

Q17. Which class updates the schedule of the activities? (0/1 pt)

- ActivityController (1 point)
- Everything else (0 point)

2. Maintenance Questions

Q19. The machines of the gym have sensors that collect data on the performance of the member. The performance data are sent via Bluetooth to the phone of the member who can visualize these data. How would you update the design to accommodate this change?

- Each Machine should have one Sensor, the Sensor collects data on the performance. The data are sent to the PerformanceTracker via Bluetooth. The PerformanceTracker help to visualize the data by updating the PerformanceView. **(0.5 pt)**
- Each Machine should have one Sensor, the Sensor collects data on the performance. The data are sent to the ActivityController via Bluetooth. The ActivityController help to visualize the data by updating the PerformanceView.**(0 pt)**
- Each Machine should have a Sensor and a BluetoothUnit, the Sensor collects the data which are transferred to the BluetoothUnit of the Machine. The BluetoothUnit of the Machine connects to the BluetoothUnit of the phone. The PerformanceTracker gets the data from the BluetoothUnit of the phone and updates the PerformanceView. **(1 pt)**
- Each Machine should have a Sensor and a BluetoothUnit, the Sensor collects the data which are transferred to the BluetoothUnit of the Machine. The BluetoothUnit of the Machine connects to the BluetoothUnit of the phone. The ActivityController gets the data from the BluetoothUnit of the phone and updates the PerformanceView. **(0 pt)**

Q20. The booking of a facility at the Fitness Center should be payed within 3 days, otherwise it will be automatically cancelled. How would you update the design to accommodate this change?

- The Booking entity should have a property to record the time/date of the booking. The recorded time/date will be used by the BookingController to cancel the booking in case that three days are passed without having a payment. **(1 pt)**

- The Facility entity should have a PaymentTrigger which is observed by the FacilityController. When three days are passed without having a payment, then the FacilityController cancels the booking. **(0 pt)**
- The Facility entity should have a PaymentTrigger which is observed by the BookingController. When three days are passed without having a payment, then the BookingController cancels the booking. **(0.5 pt)**
- The BookingController should have a property to record the time/date of the booking. The recorded time/date will be used by the BookingController to cancel the booking in case that three days are passed without having a payment. **(0 pt)**

Q21. The Fitness Center has a Doctor. The doctor, who could be also a member, receives the performance data of the members on a weekly basis. Based on the performance data and when it is necessary, the doctor sends warnings/notifications to the members via email. How would you update the design to accommodate this change?

- A Doctor entity is needed and should extend the Member entity. This entity receives the performance data of the members via the PerformanceView on a weekly basis. The Doctor entity should have one method: notifyMembers() in order to send warnings. **(0 pt)**
- A Doctor entity is needed and should extend the Member entity. The Doctor entity should have two methods: getPerformanceData() and notifyMembers(). **(0.5 pt)**
- A Doctor entity is needed. This entity should be connected to the PerformanceViewer. The PerformanceViewer should have one method: sendPerformanceData(). The Doctor entity should have one methods: notifyMembers(). **(0 pt)**
- A Doctor entity is needed and should extend the Member entity. This entity receives the performance data of the members via the PerformanceTracker on a weekly basis. The Doctor entity should have one methods: notifyMembers(). **(1 pt)**