# Platinum Gyms - Mock Hypothetical

# Section 1 Instructions

The candidate will have 120 minutes to read, evaluate, and document a high-level architectural solution to the scenario outlined in Section 2. The solution should:

* Describe the overall system architecture and design decisions of the solution
* Describe the security architecture and the rationale for the solution.
* Identify and discuss any potential risk areas.
* Describe the various data and integration aspects concerning the solution
* Detail a delivery methodology and quality structures to ensure a successful project

The candidate should target the presentation to a technical IT architecture audience. In cases where requirements are not explicitly stated for the scenario, the candidate should use best judgment and make appropriate assumptions based on the information provided. The candidate should detail any assumptions that were made in these cases. The judges are not permitted to answer any clarifying questions related to the hypothetical scenario.

The candidate will be evaluated on their ability to assess the scenario requirements, design a solution, communicate the proposed architecture, define a project delivery structure, and justify their decisions. Any tools can be used for the presentation. No hard-copy or online materials may be referenced during the exam.

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# Section 2 Scenario – Platinum Gyms

### Introduction

Platinum Gyms are a UK market leader in the fitness and wellbeing sector for high-end gymnasiums. The company was founded in 2001 and has grown rapidly by acquisition over the last few years. During this period of rapid growth, the company has been focused heavily on sales and revenue and not on rationalization and consolidation of their internal systems and business processes.

As part of the new corporate vision, the Platinum Gyms board have decided to address the growing inefficiencies within the business and refocus on the customer experience. A key driver to this has been the realization that a 10% increase in renewals would raise annual net profit by 15%. A second board-level initiative is to streamline and centralize marketing processes - such activities are currently taking place within the gyms using a variety of tools and processes. A growing number of complaints are being received from existing gym members who have been targeted by marketing campaigns by other gyms owned by Platinum Gyms in the same area.

In order to support the board initiatives, a number of IT projects have been commissioned across the enterprise ecosystem. The Salesforce implementation project is referred to internally as the "membership portal" project.

### Relevant Statistics

* 165 Consumer Gyms - average 4,000 active members and 8,000 historic members per gym
* 75 Corporate Gyms - average 1,000 members and 2,000 historic members per gym
* Each gym runs 20 classes per-day, attended by 20 members on average
* Platinum Gyms employs the following staff across their network of gyms
  + 500 part-time personal trainers (PT)
  + 400 part-time instructors
  + 300 full-time instructors
  + 30 marketing staff
  + 80 back office staff (across accounting, legal, HR, customer service & operations)

### Systems Landscape

Membership data is currently held in 4 consumer legacy systems and 1 corporate legacy system. The corporate system will not be decommissioned in the first phase of the project; all consumer legacy systems will be. The corporate membership system is deployed on-premise and has a primitive SOAP based web-service API.

Platinum Gyms has contracted with GlobalPay, an online payment provider, to support payment processing for the new system (portal based and contact centre). GlobalPay provides 2 integration solution options for payment processing; a hosted payment page and a direct API. GlobalPay will replace 4 other payment providers currently in use by the legacy systems.

All payments recorded into the new systems must flow into the sales ledger of the back-office accounting system used by the finance department. A custom .NET application currently consolidates payment data across the legacy systems and transforms the data into the ledger formats and structure required for direct insert into the accounting system database - this approach is required as no API is supported. The internal employee who developed this integration is still on staff within the IT department.

The HR department within Platinum Gyms use an existing Salesforce instance extensively for employee performance management and benefits programs. A commercial AppExchange package has been bought and installed into a Salesforce instance used exclusively by the HR department. It is imperative that instructor and personal trainer utilization metrics flow from the new system into the HR application - conversely, the HR system is viewed as the master system of record for contact details such as phone, email and address.

A parallel project within Platinum Gyms involves a wholesale redesign of the existing Active

Directory infrastructure. An objective of this project is to implement single sign-on across   
all internal systems for internal and external users. Platinum Gyms would also like to a solution to cater for user provisioning and deprovisioning. Internal users should also be challenged with an approach of multifactor authentication. External users should be able to login and register using Facebook or Twitter. It is therefore important that the membership portal project deliver a design as to how identity will work with the new system and declare any dependencies early.

The IT department at Platinum Gyms have expressed concern about outbound email bypassing their Exchange infrastructure. Platinum Gyms security policy also mandates that records of all emails sent and received by their systems be retained for 10 years including their content and any attachments.

Platinum Gyms intend to implement AgentCloud, a cloud-based CTI system, into all of their call centres. This will go live at the sameas the new system. AgentCloud exposes a RESTful-style web service API. It is unknown whether a Salesforce CTI adapter exists.

### Data Model Considerations

All active and historic members will be migrated to the new system. Historic members are required to support marketing campaigns in order to target them for promotions if they sign back up.

People can be members of both a corporate gym and a consumer gym and a single customer view of these people is critical.

Corporate gyms can be shared by multiple corporate clients. In the City of London, multiple investment banks share the same onsite gym.

Corporate members must exist in the new system to support coordinated marketing campaigns and to enable access to the membership portal for general fitness information and class timetables. Class booking will remain a function of the legacy system in the interim period - phone-based only.

Historical class timetables and bookings will not be migrated to the new system.

Each gym has a manager and a front desk team. Instructors define a class timetable for the week which is approved by the manager before publication.

Classes can be charged-for or free-of-charge. The same class may have a different price at different gyms.

Complex discounting rules exist for bulk PT pack purchases. This logic is currently implemented in a Java applet and used by the contact centres during the ordering process.

A PT is assigned to a base gym, but they can work at any gym (corporate and consumer) in the area.

Members buy PT packs (10 appointments) which are delivered by the selected PT at a gym. The pack is linked to the PT. Instructors deliver fitness classes; each instructor works at a single gym only.

### Functional Requirements

**Membership portal**

Beyond the consolidation of member data into a single system, the core functional requirement for the new system is a membership portal.

* Self-register using social media (Facebook & Twitter) but require their membership card number to be entered
* Book classes and pay
* Buy PT packs and make appointments
* Guest/public listing of class information

**Contact Centre**

The membership portal project will also facilitate a re-organization of the contact centre operation - with all customer interactions consolidated into Salesforce. A key goal here is to provide a unified desktop for agents linked to the CTI system. Additionally, a simple, structured process is required for booking.

* Find people, take booking for class and payment
* Book PT appointments (view PT availability schedules)
* Log member complaints

**Marketing**

The central marketing team will use the consolidated customer data for:

* Campaigns to non-members & previous members
* Nurture journey targeting members who are not very active with periodic personalised emails
* Joint campaigns for consumer and corporate members

**Gym Administration**

The gym administration team comprises the gym manager, class instructors and the front desk personnel. The following administrative tasks must be supported.

* Instructor defines classes at gyms
* Manager approves each instructor's’ classes for the week
* Manager adds corporate message (for display in the portal) - linked to corporate account
* Front desk updates member details, makes bookings and payments, sells PT packs and makes appointments

**Personal Trainers (PT)**

A mobile app will be provided which runs on tablet or smartphone devices. The mobile app must support the following;

* notes management
* view and make PT appointments
* document signature capture on legal waiver forms before PT sessions

### Additional Requirements

Automated appointment reminders must be sent to members for PT sessions to ensure maximum attendance.

Members can opt to cancel their membership by sending an email to a designated email address. All cancellation email must be processed automatically into the newsystem and be stored against the member record, the gym manager must be notified and an incident raised for the renewals team in the contact centre to follow-up.

The newly established central marketing team needs the ability manage campaigns and to automate the sending of marketing email out to all historic members of a gym at the same time.

### Record Access Requirements

* Members can only view published classes
* Members can work with multiple personal trainers (PT)
* Members can create bookings and appointments
* Corporate members see corporate messages in the portal
* Instructor can view all classes occurring at their gym
* Gym manager can only view PT bookings taking place at their gym
* Gym manager can approve Classes
* Gym manager and front desk can only view and edit members with active memberships at their gym and can create bookings
* PT can edit their notes
* PT can create and view their appointments
* PT can view class bookings made for members they are training
* Contact centre agents can view all classes at all gyms, all members and all bookings and appointments
* Contact centre agents can edit member details and create bookings and appointments
* Marketing team can view all active and inactive members and all their bookings and appointments

### Reporting Requirements

The membership portal project must deliver a single view of the customer and enable Platinum Gyms to monitor various KPIs, including;

* Member profitability across all gyms and per-gym
* Class type popularity year-on-year
* Attrition per-gym
* Revenue per Personal Trainer
* Utilization per Instructor