Systems Design Case Study

Company Overview

A new gym 'Fox Fitness Club (FFC)' is opening up in the Hudson Valley and has hired your team as an IT consultant to design their information system. Along with regular fitness equipment, it plans to launch group fitness classes for Zumba, Yoga and Cardio. The gym will have 2 membership plans as well as a prepaid plan.

- Basic Plan – $9.99/month
  - Equipment.
  - Guests - $10/session – only equipment.
  - Group fitness class - $5/session; additional $5 for guest/session
  - Tanning and Hydro Massages - $5/session

- Fox Plan - $19.99/month
  - Equipment.
  - Guest Privileges.
  - Free group fitness classes.
  - Tanning and Hydro Massages

- Prepaid Plan
  - $15 for 10 entries (Access Restricted to Equipment only).
  - Guests - $10/session – only equipment.
  - Group fitness class - $5/session; additional $5 for guest/session
  - Tanning and Hydro Massages - $5/session

As per gym's policy new members have to be registered in person and they have to agree for their credit/debit card to be set for auto monthly payment based on their plans. Members may switch between the plans and they can cancel anytime without any penalties. Prepaid Plan should also be purchased in store.

Group Fitness Classes: Zumba, Yoga and Cardio

Every month gym will release the schedules for the Group Fitness Classes and allow members to sign up for the class online. The system should prompt Basic Plan and Prepaid Plan members to buy the pass online or in person.

Gym will also sell various drinks and supplements along with merchandises like t-shirts, gym bag, water bottle, gloves, sweat shirts, etc. As per Gym's policy, they will be sold in store only not online.

Fox Gym will be open 18 hrs from 6:00 am to Midnight each day. The owner initially plans to hire 3 managers (each working 6 hours shift) and 8 assistants to manage the day to day operations.

Trainers (Hired on a three month contract).

Requirements

Here are the initial requirements for the system.

- Keep track of membership sales and membership dues.
- Keep track of members, their guests.
    - How often they use the gym?
    - Do they bring their guests? If yes how often?
    - How many classes they enroll in?
- Keep track of sales (drinks and merchandises)
- Keep track of employee records and their schedules.
- Keep track of trainers who work on a part time basis.
- Generate monthly group fitness class schedules and allow members to register online. (Please see the example schedule below)

Instructions

Fox Gym is relying on your system to manage its operation as well as to provide insights for future growth. This case study represents the documentation of user requirements and related information. Your team is collectively responsible for designing an information system that will account for the needs of this company.

September 2016 schedule (max. class size 25)

	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
8:00 am – 9:00 am	Zumba (Ashley)	Yoga (Chris)	Yoga (Chris)	Yoga (Chris)	Zumba (Ashley)	Yoga (Chris)	Yoga (Chris)
9:00 am – 10:00 am			Cardio (Albert)	Cardio (Albert)	Cardio (Albert)	Zumba (Ashley)	Zumba (Ashley)
11:00 am – 12:00 pm	Zumba (Elena)	Zumba (Elena)	Zumba (Elena)	Yoga (Dipti)	Yoga (Dipti)	Cardio (John)	Yoga (Dipti)
2:00 pm – 3:00 pm	Cardio (John)	Cardio (John)	Cardio (John)	Zumba (Elena)	Cardio (Mark)	Yoga (Dipti)	Cardio (Mark)
5:00 pm – 6:00 pm	Yoga (Sara)	Yoga (Sara)	Yoga (Sara)	Yoga (Sara)	Yoga (Sara)	Zumba (Laurie)	Zumba (Laurie)
7:00 pm – 8:00 pm	Zumba (Simon)	Zumba (Simon)	Cardio (Mark)	Zumba (Laurie)	Zumba (Laurie)		
8:00 pm – 9:00 pm	Cardio (Mark)	Cardio (Cat)	Zumba (Simon)	Cardio (Cat)	Cardio (Cat)		