Planet Fitness – Sports Club Online System

Group # 1

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Project Name:	Planet Fitness – Sports Club Online System
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Introduction

Fitness and recreation clubs are one of the booming sectors in today's world.

Our main focus for this particular project is to create an application, which will demonstrate how technology can automate the process, streamlines the communication and helps them to grow and make more profit.

Also, we wanted to work on a project that has a significant chance of being implemented in a real-world scenario; there appears to be no readily available product for this particular market niche. A large number of clubs still perform their login, slot booking and assigning trainer activities manually which is very cumbersome. Our goal is to create a low-cost software solution that will simplify the day to day operational tasks for these sports club.

Project Overview and Statement of Proposal

We propose to create an online system which will focus on automation of manual processes; thereby reduces the operational work which consumes lots of time and energy.

The main purpose of our application would be to assist the sports clubs with their customers as well as Trainers requirement. We are planning to utilize business logic and database information store to create a high-level, role-specific web application with functionalities that are based on the operational needs of sports clubs.

Project Scope and Objectives

The system will enable members to book their slots online for any of the training activities; they can select their coach/trainer and can pay their bills. Trainers are assigned to slots and activities. The manager of the club can monitor the trainer's work.

Presently, Inventory management is kept out of scope.

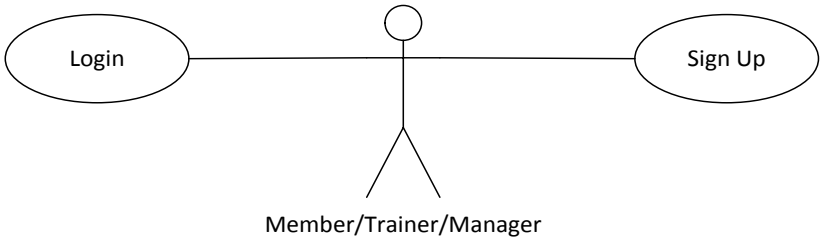
Use Case description

1. REGISTRATION
    - SIGNUP -In order to register in the system each user is required to sign up successfully.
    - LOGIN - Planet fitness contains 3 type of login accounts: Member, Trainer and Manager. Every user is required to provide USER ID & PASSWORD to login successfully.
2. MEMBER
    - View Profile detail
    - Update Profile detail
    - Member can book a SLOT
    - Member can delete a booked SLOT entry.
    - Member can make PAYMENT.
3. TRAINER
    - View Profile detail
    - Update Profile detail
    - Trainers can view slot information.
4. MANAGER
    - View Profile detail
    - Update Profile detail
    - Manager can add a SLOT.
    - Manager can edit a SLOT.
    - Manager can edit EMPLOYEE detail.
    - Manager can add/hires EMPLOYEE to the system.

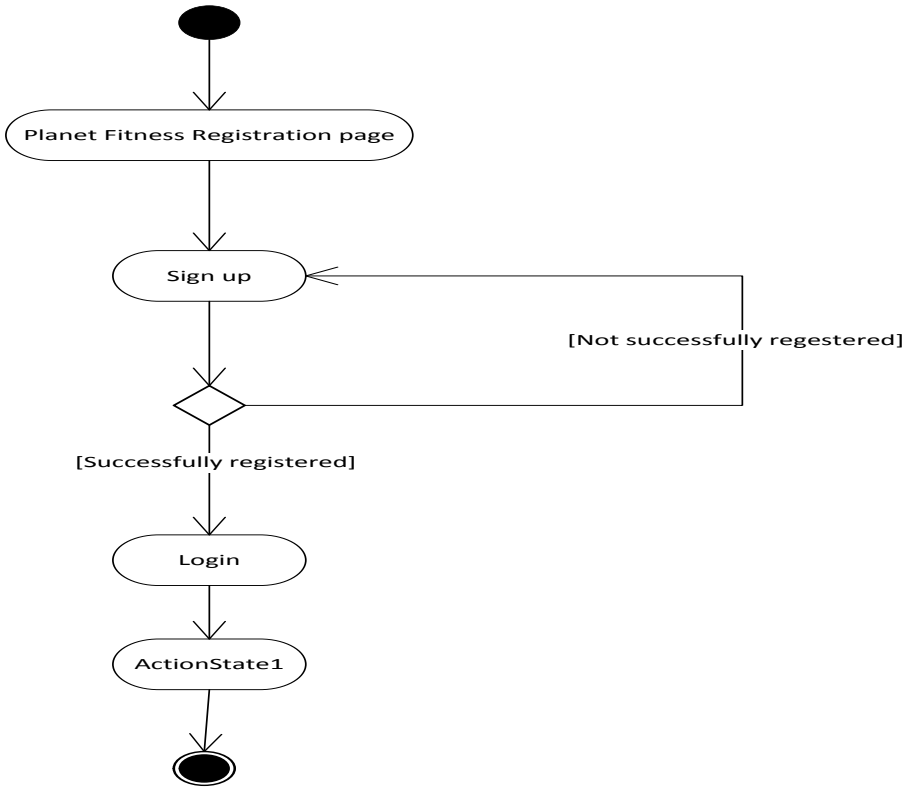
Following Use Case diagrams and Activity diagrams describes roles of individual actors in the system.

1. REGISTERATION – The registeration is a common process for all the participating actors i.e. Manager, Trainer and Manager.

a. Use Case – Registeration

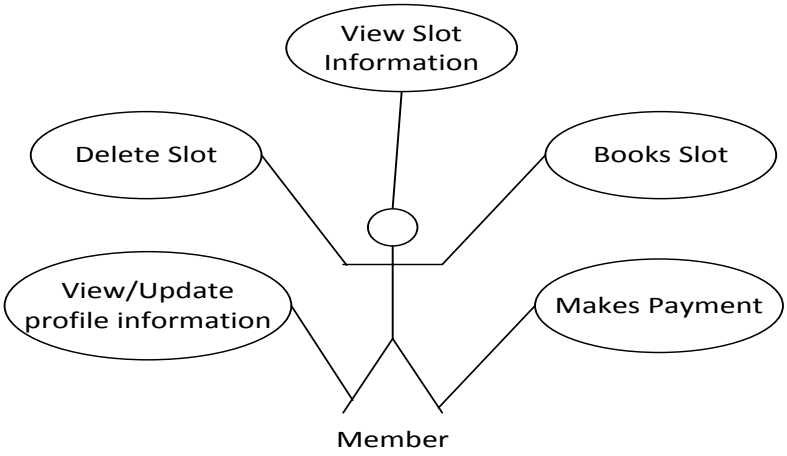


b. Activity Diagram – Registeration

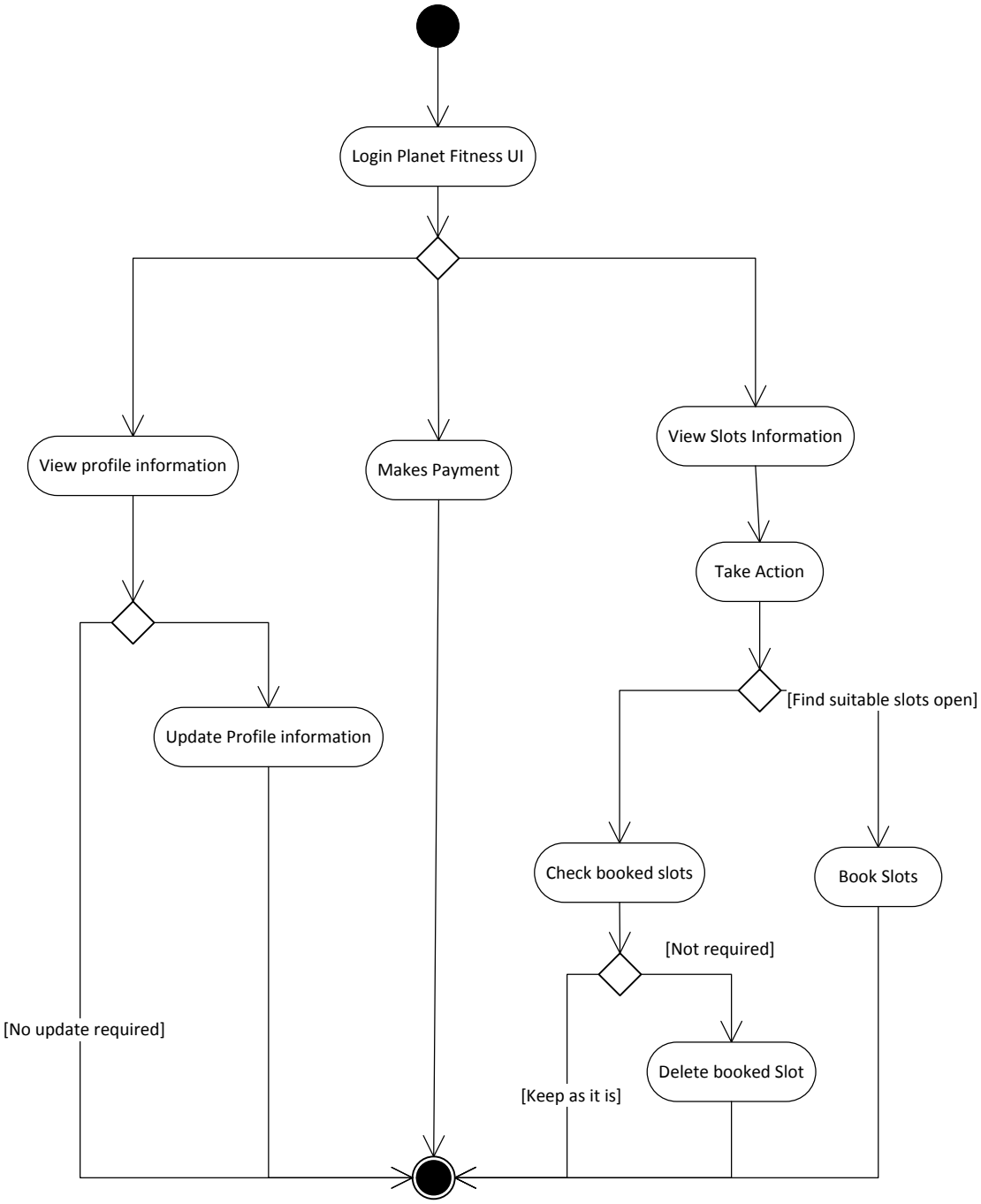


2. MEMBER – The member is an abstract actor

   a. Use-Case - Member

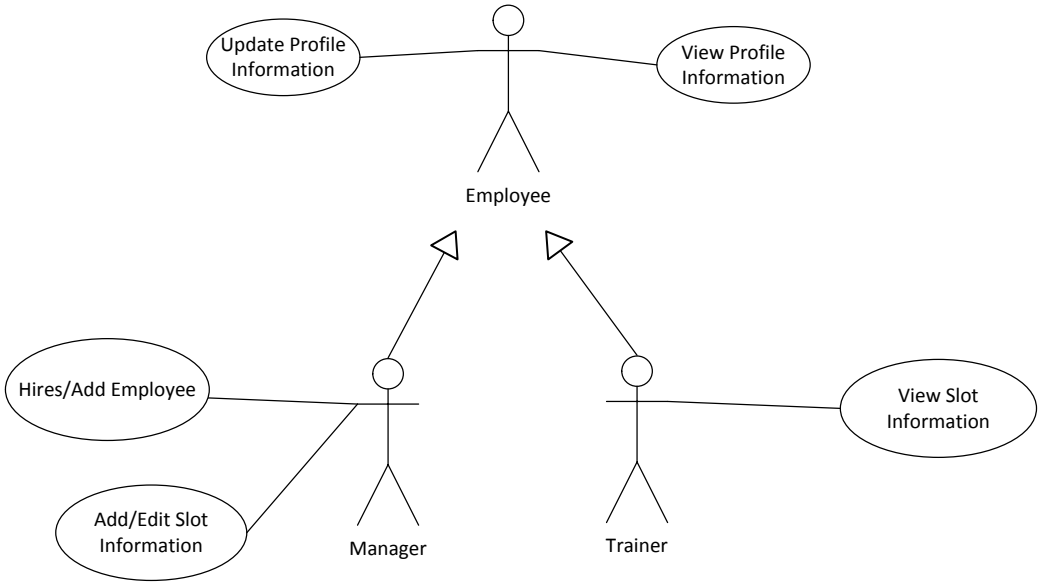


   b. Activity Diagram – Member

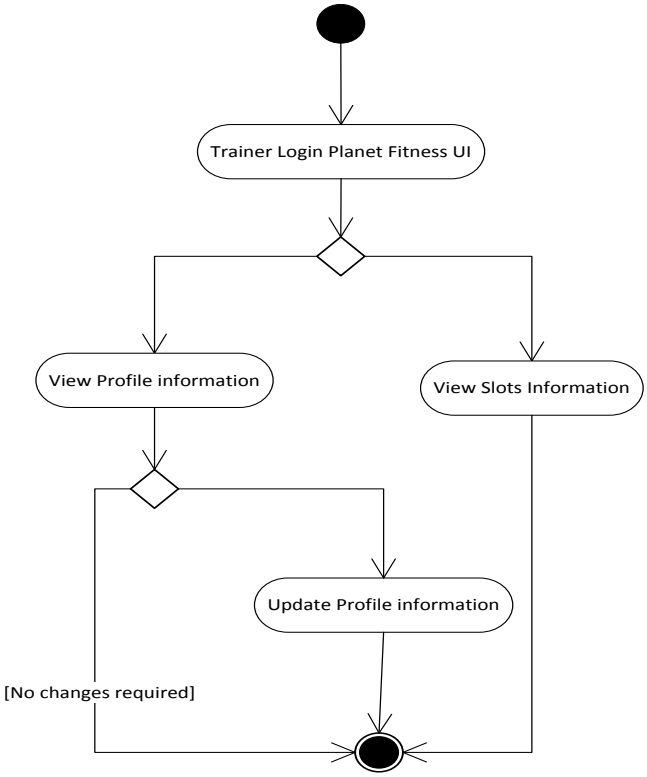

Login Planet Fitness UI
View profile information
Makes Payment
View Slots Information
Take Action
Update Profile information
[Find suitable slots open]
Check booked slots
Book Slots
[Not required]
[No update required]
Delete booked Slot
[Keep as it is]

3. EMPLOYEE - The Employee is a generalized actor. Manager and Trainer are specialized actor of Employee.

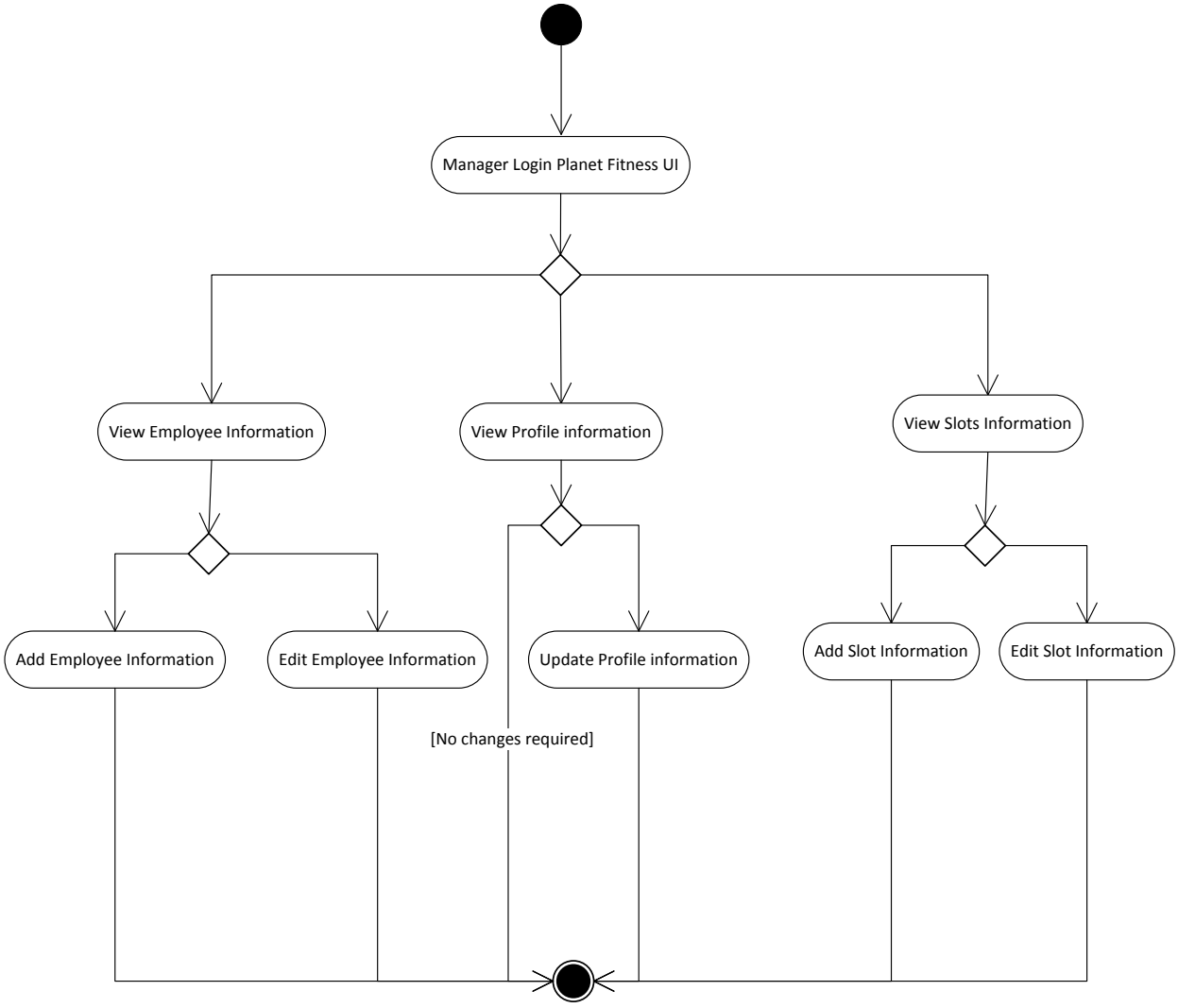
   a. Use Case - Employee (Trainer/Manger)



   b. Activity Diagram – Employee (Trainer)

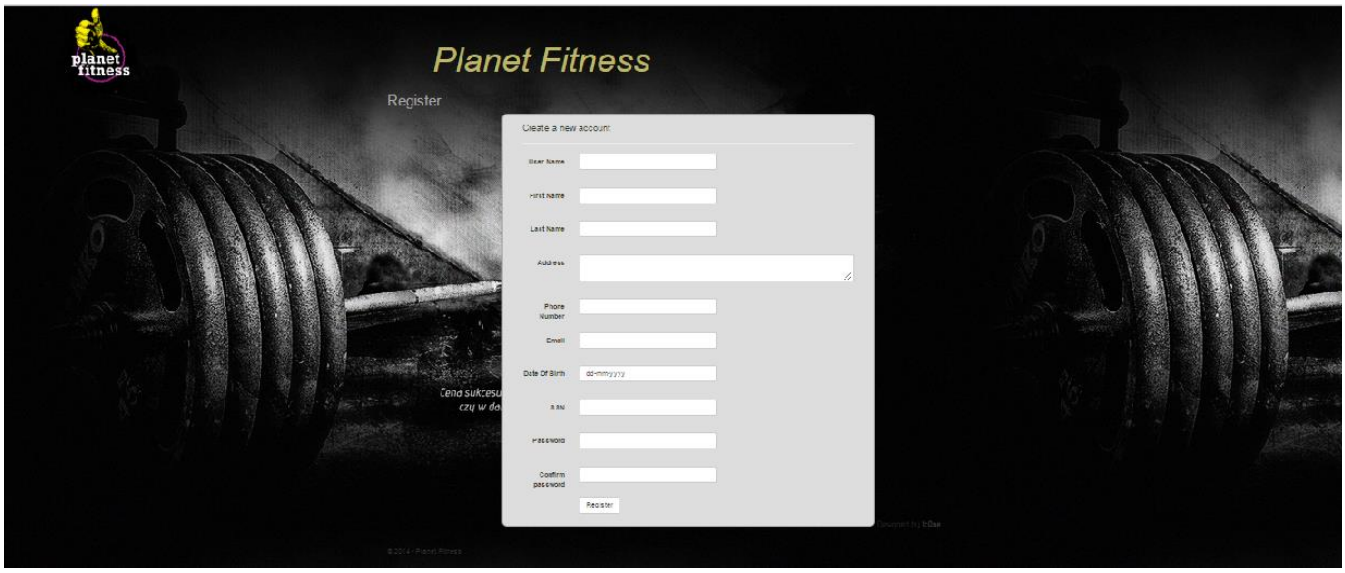


c. Activity Diagram – Employee (Manager)

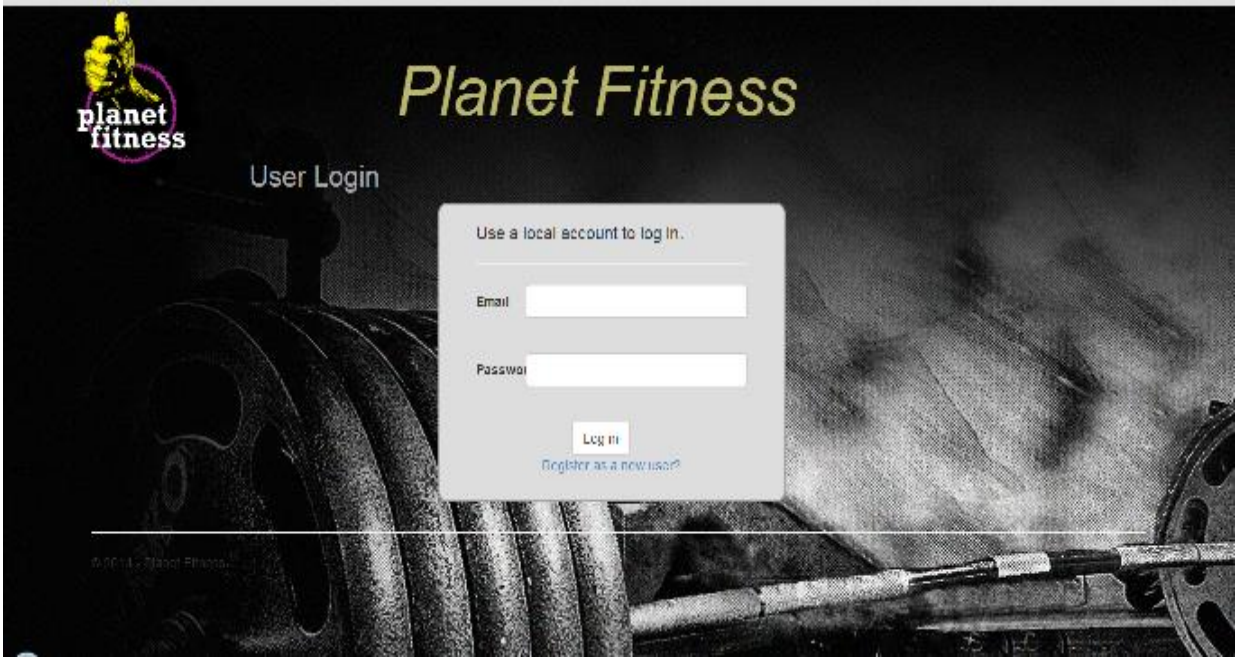


Planet Fitness Screen prints

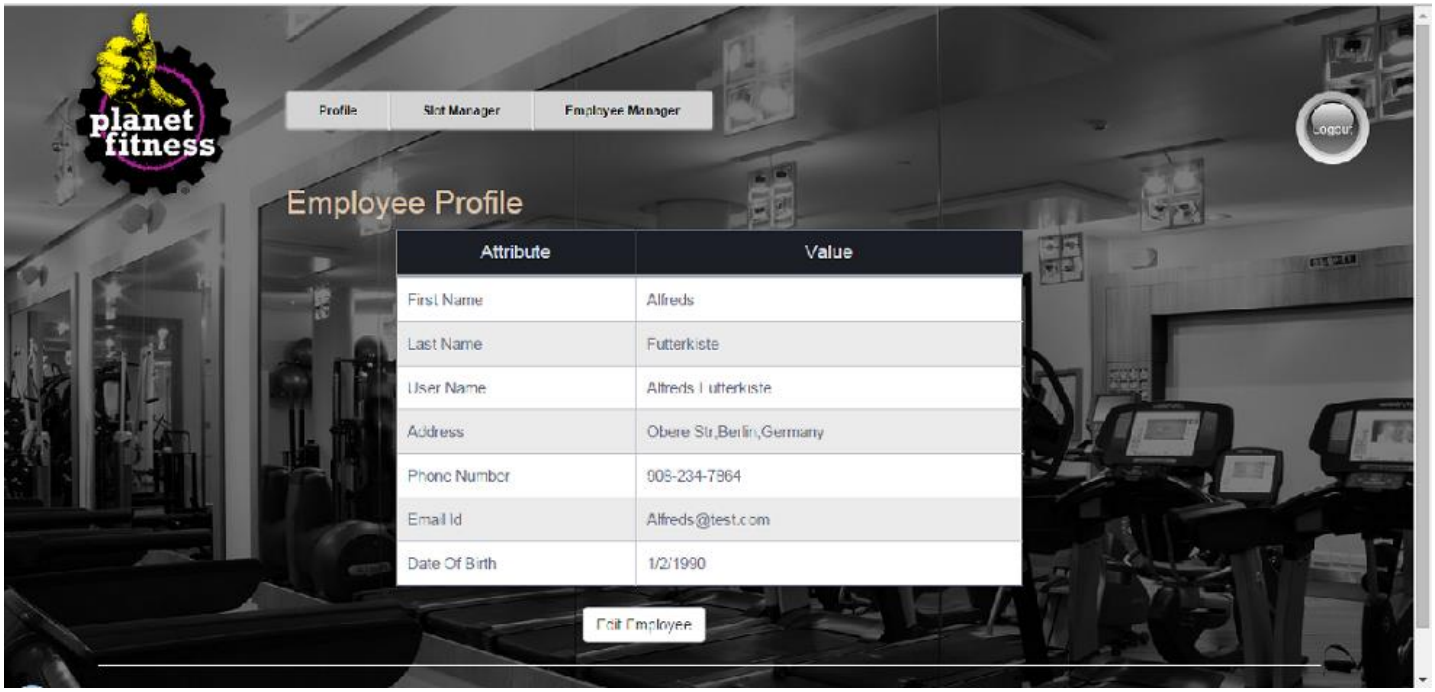
a. Registeration page – To create credentials



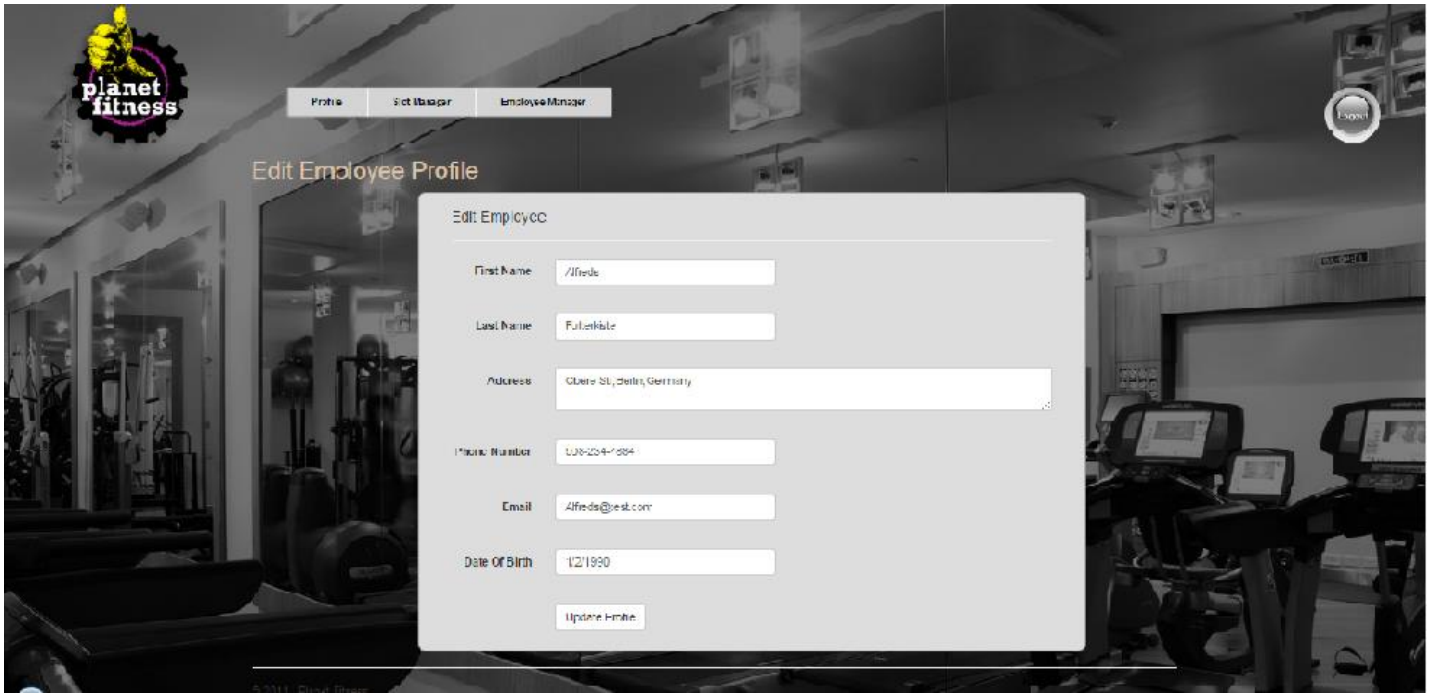
b. Login Page – After creating login credentials, users can login here



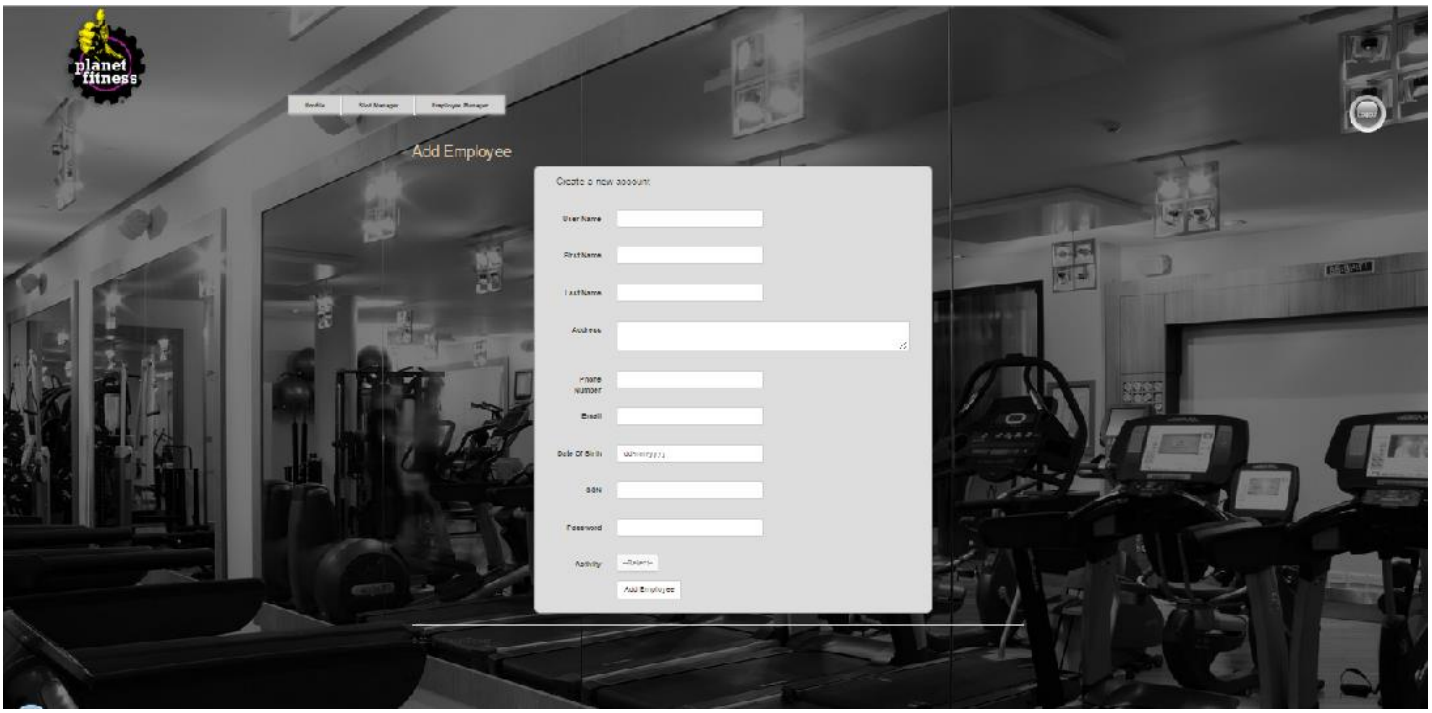
c. Employee – Manager home page



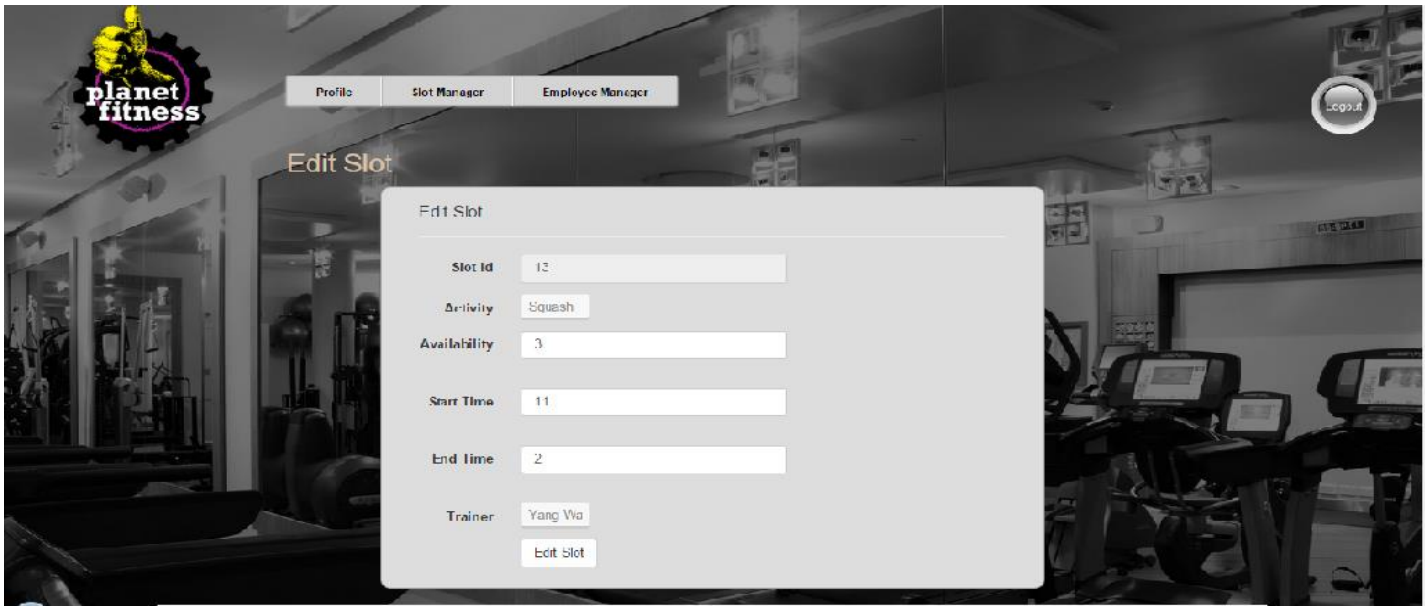
d. Employee – Manager – Edit Employee detail page



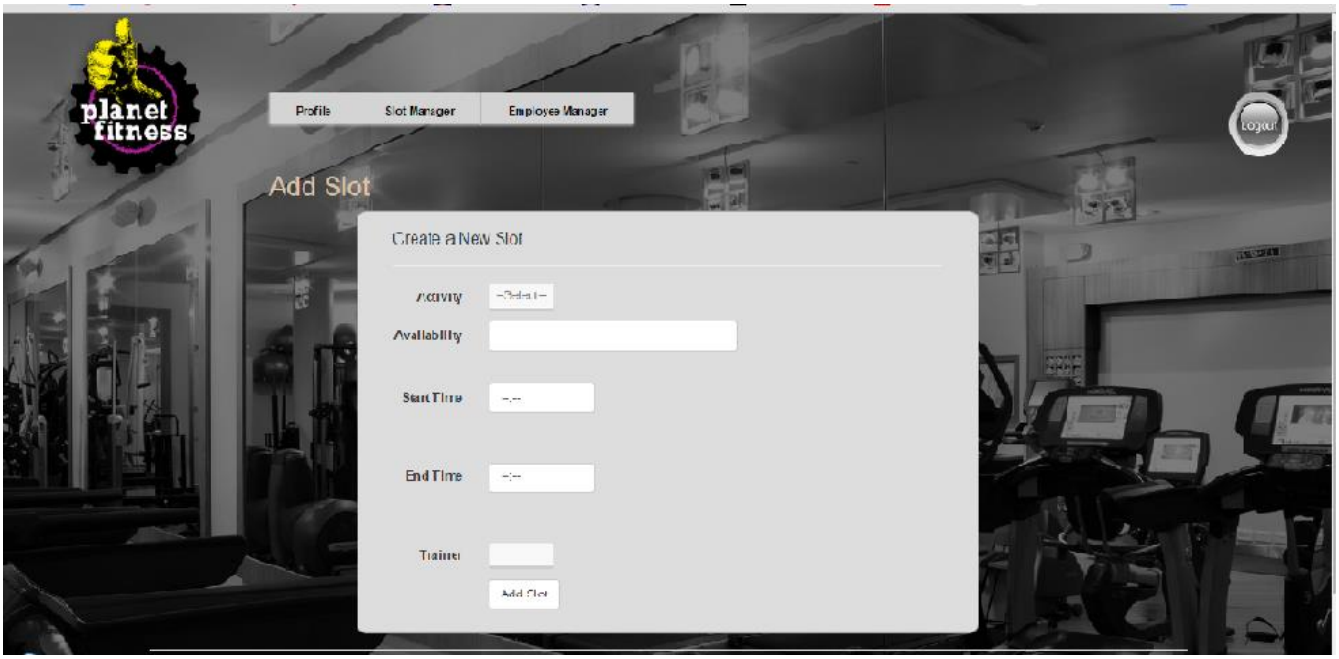
e. Employee – Manager – Add Employee page



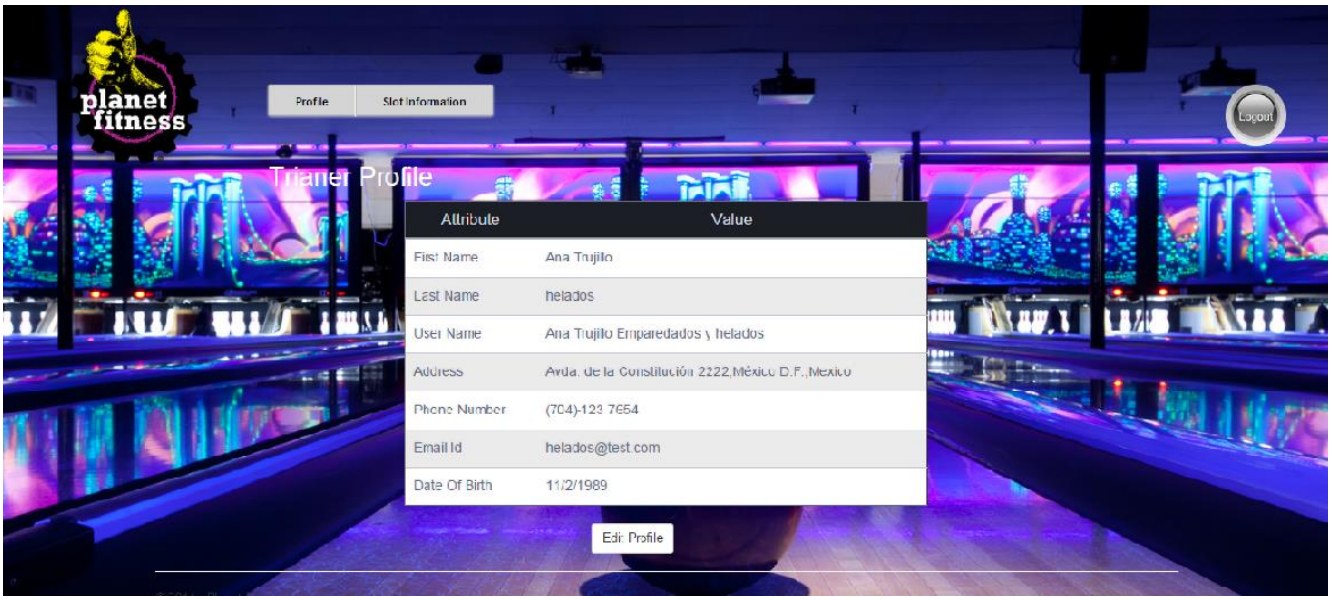
f. Employee – Manager – Edit Slot Page



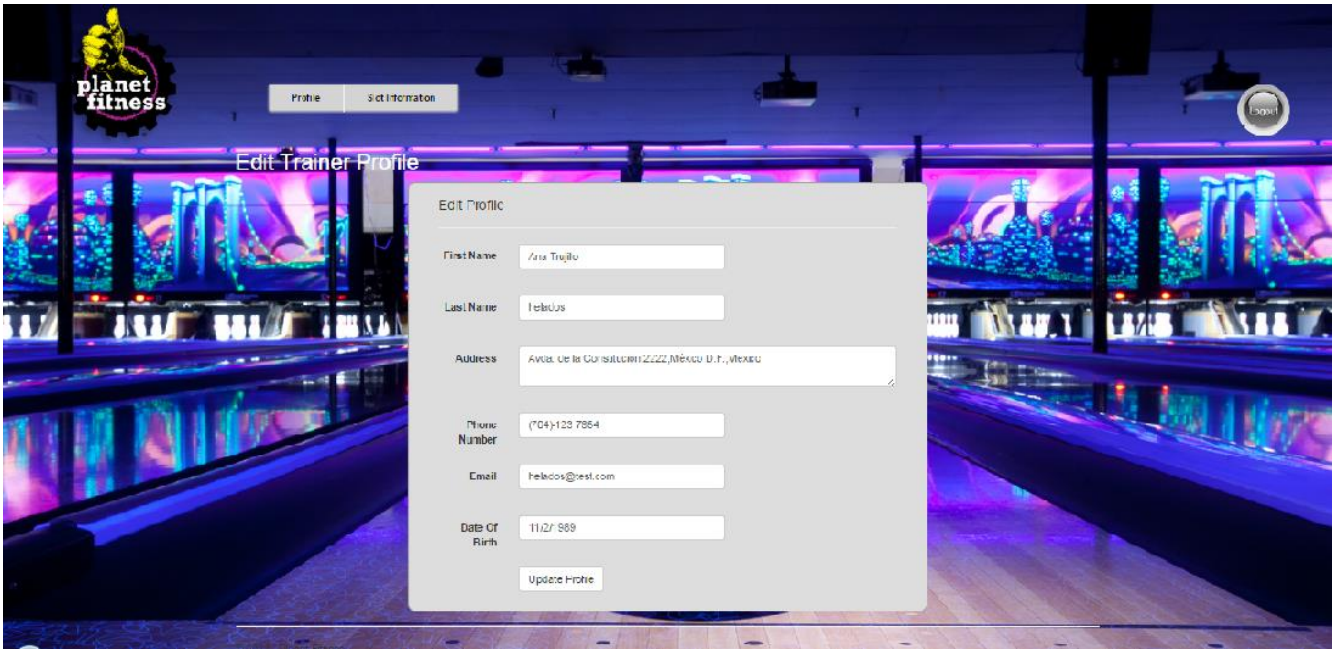
g. Employee – Manager – Add Slot



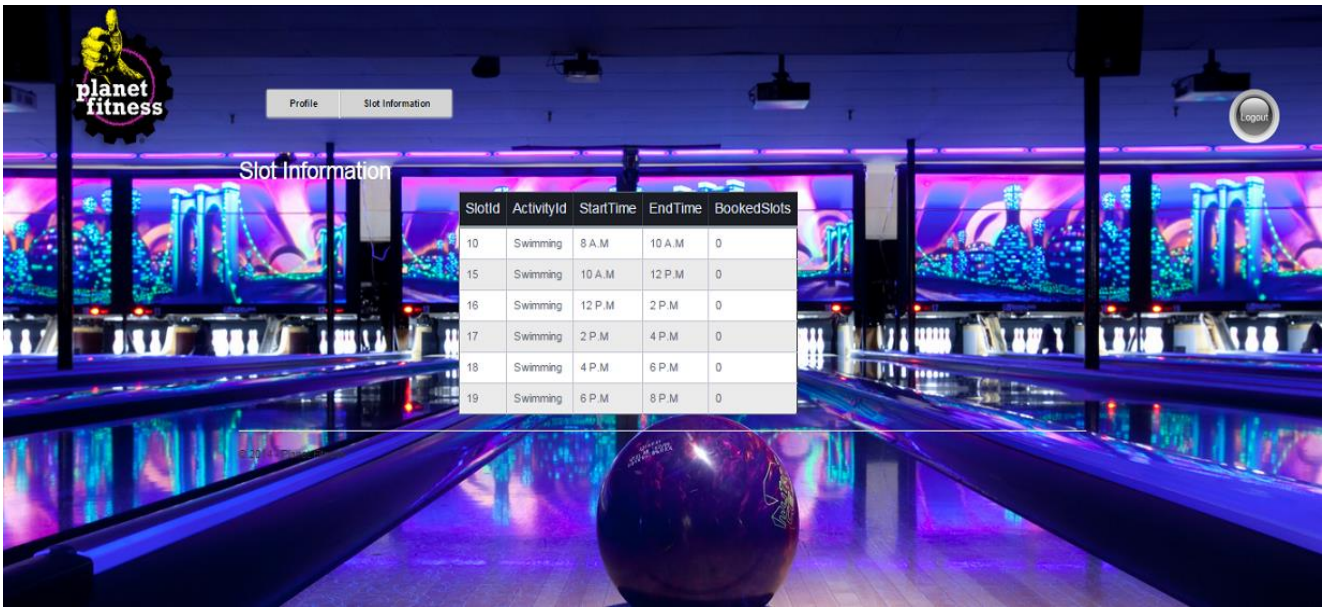
h. Employee – Trainer – Main Page



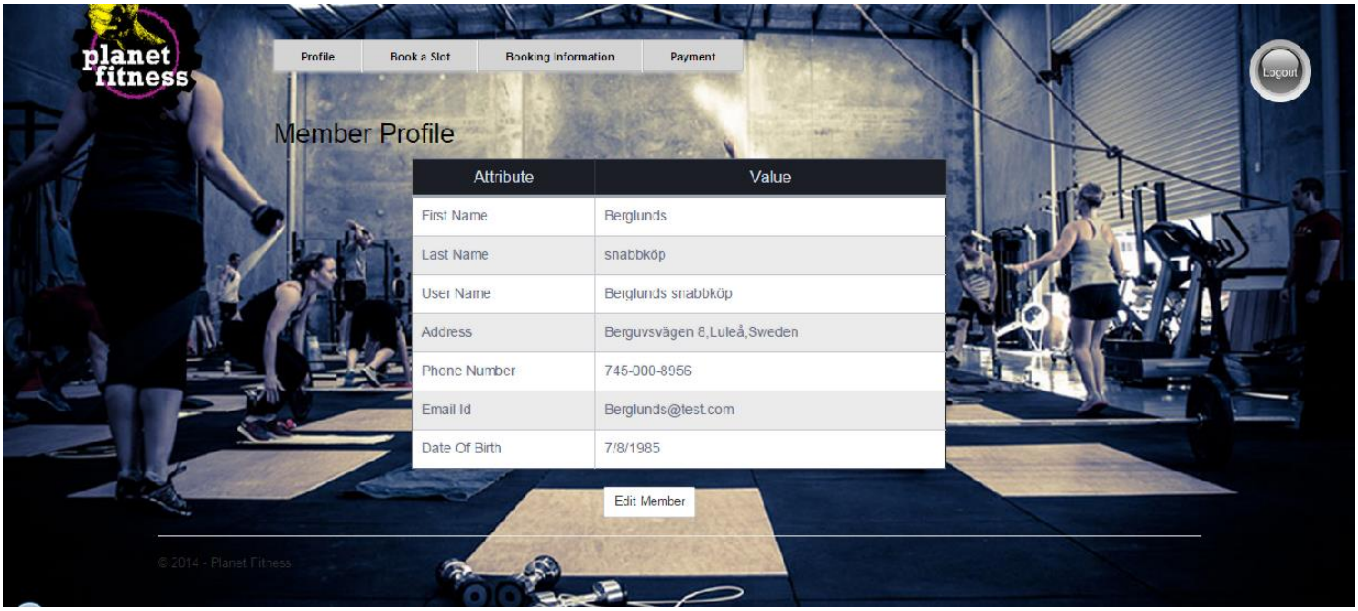
i. Employee – Trainer – Edit Profile page



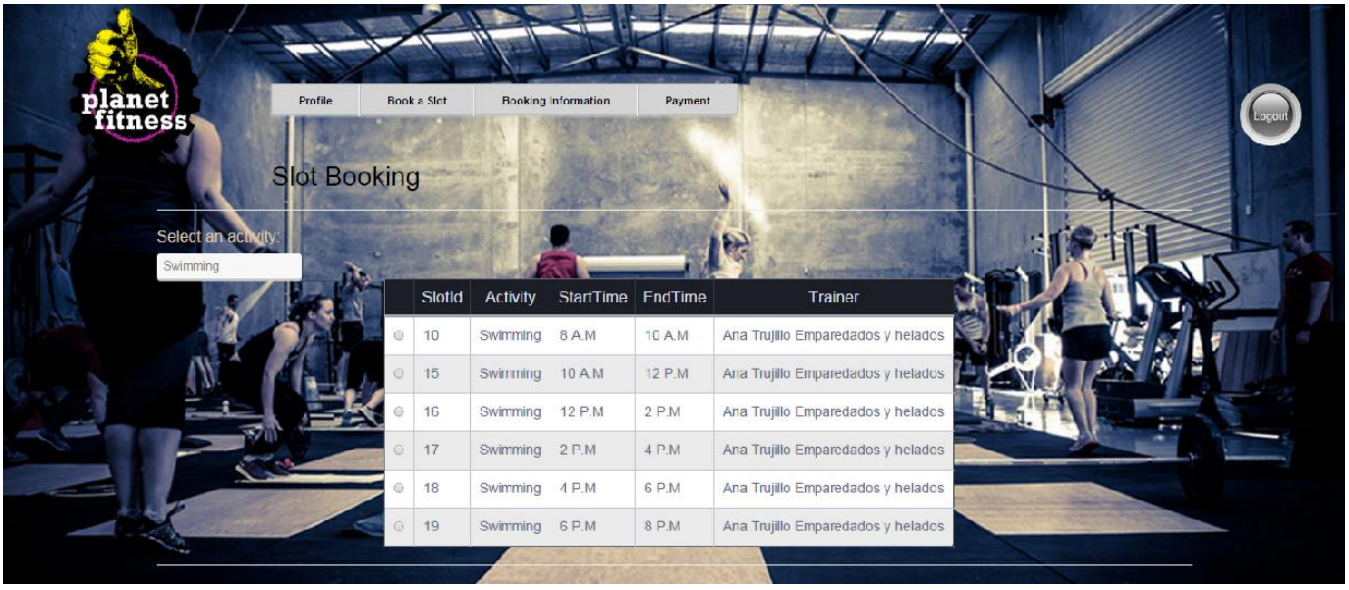
j. Employee – Trainer – Slot Information Page



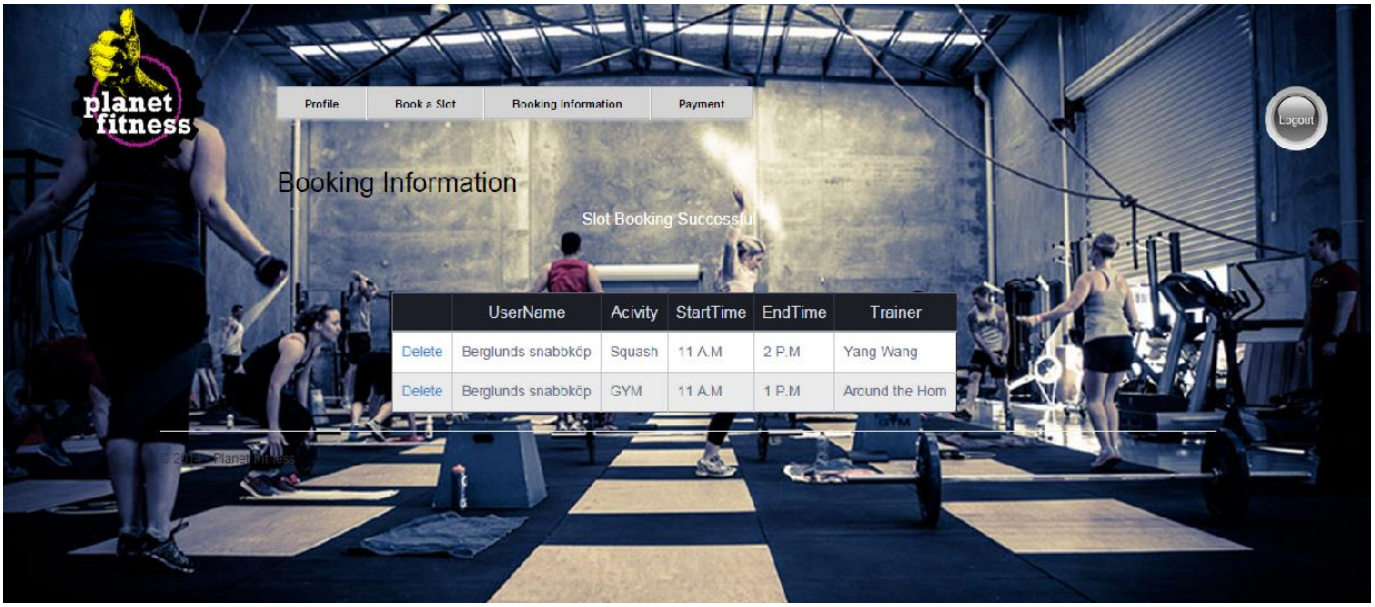
k. Member - Main page



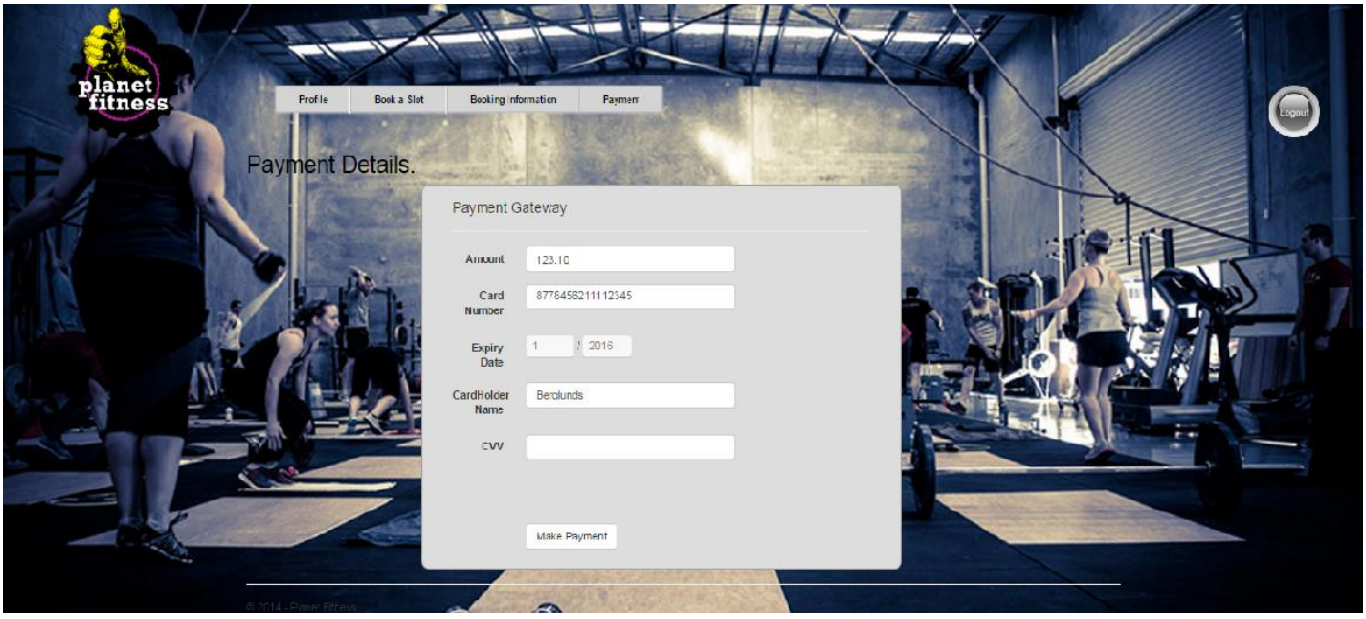
l. Member - Slot booking page



m. Member – Booking Information page



n. Member – Payement page



Database Design

1. Functional Requirements

The planet fitness consists of 3 actors: Member, Trainer and Manager. Following are the functionalities provided by each actors.

a. Member

1. Allows a **USERACCOUNT** to be authenticated as one and only one **MEMBER** and each **MEMBER** to be authenticated as one and only one **USERACCOUNT**.
2. Allow a **MEMBER** to view or update profile information, and allows each member profile to be viewed or updated by specific **MEMBER.**
3. Allow a **MEMBER** to register for zero or more **SLOTS**, and allow each **SLOT** to be registered by zero or more **MEMBERS.**
4. Allow a **MEMBER** to view and delete zero or more booked **SLOTS**, and allow each booked **SLOT** details to be viewed and deleted by zero or more **MEMBERS.**
5. Allow a **MEMBER** to make one or more **PAYMENTS** but each **PAYMENT** can be paid by one and only one **MEMBER**.

b. Trainer

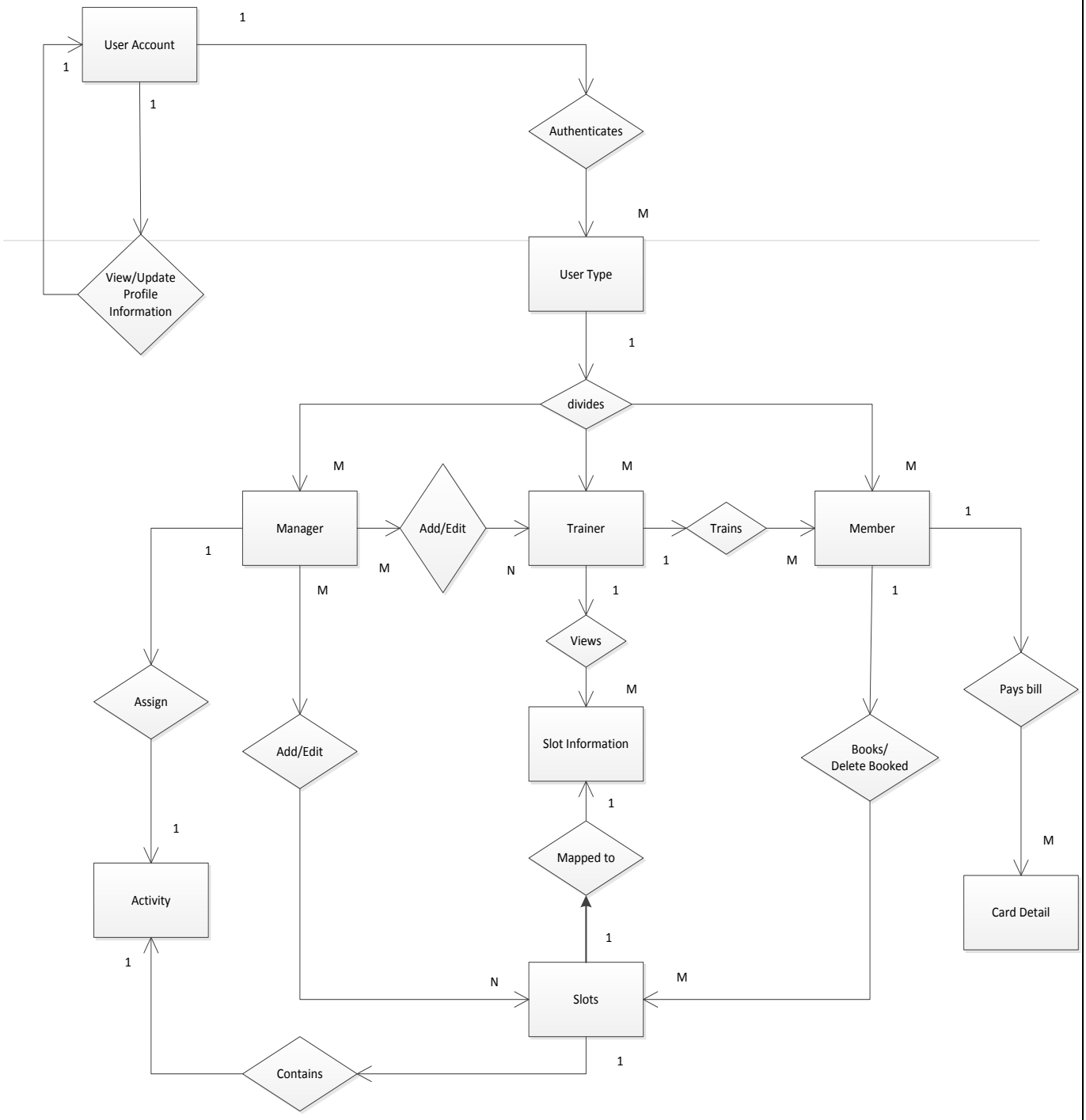
1. Allows a **USERACCOUNT** to be authenticated as one and only one **TRAINER** and each **TRAINER** to be authenticated as one and only one **USERACCOUNT**.
2. Allow a **TRAINER** to view and update his profile information, and allows each profile to be viewed and updated by specific **TRAINER.**
3. Allow a **TRAINER** to train zero or more **MEMBERS**, and allow each **MEMBER** be trained by zero or more **TRAINERS**.
4. Allow a **TRAINER** to view SLOT information, and allow each **SLOT** information be viewed by **TRAINERS**.

c. MANAGER

1. Allow a **MANAGER** to view and update his profile information, and allows each profile to be viewed and updated by specific **MANAGER.**
2. Allow a **MANAGER** to add / edit zero or more **SLOTS**, and each **SLOT** can be added / edited by one and only one **MANAGER**.

3. Allow a **MANAGER** to add/hire and update employee information, and allows each employee to be add and updated by specific **MANAGER.**

The ER diagram directly below shows the relationship between entities:



The relational schema will show the Entities in tabular form, with the attributes associated with the entities as columns. These will be the relation schema(s) mapped from the ER diagram (Shown here as an instance of each entity with one place-holder tuple)

a. UserAccount Table:-

UserAccount Id_in(PK)	UserName_vc	Password_vc	LastName_vc	FirstName_vc	Address_vc
3	John12	*********	Smith	John	California

PhoneNo_vc	EmailId_vc	DOB_date	SSN_vc	FK_UserType_UserAccount_in
817-223-1887	john@abc.com	12/8/1990	123456	10

b. UserType Table :-

UserTypeID_in(PK)	UserType
10	Member

c. Member Table :-

MemberId_in(PK)	BillAmount_de	FK_UserAccount_Member_in
5	$300.00	3

d. Activity Table :-

ActivityID_in (PK)	Activity_vc
6	Gym

e. Trainer Table :-

TrainerId_in(PK)	FK_Activity_Trainer_in	FK_UserAccount_Trainer_in
7	6	3

f. Slot Table :-

SlotID_in (PK)	FK_Activity_ Slot_in	StartTime _time	EndTime _time	NoofSlots _in	AvialabeSlots _in	FK_Trainer_Slot_in
8	6	8:00 AM	10:00 AM	3	2	7

g. Slot Information Table :-

SlotInformationID_in (PK)	FK_Slot_SlotInformation_in	FK_Activity_ SlotInformation_in	FK_Member_ SlotInformation_in
9	8	6	5

h. Card Detail Table :-

CardDetailID_in (PK)	FK_Member_ CardDetail_in	CardNumber_long	ExpiryDate_date	CardAliasName_vc
10	5	12345778900	10/2018	My Card