



NORTH SOUTH UNIVERSITY
Department of Electrical and Computer Engineering (ECE)

Project Report

Course: CSE327 (Software Engineering)

Section: 5

Group: 3

Project Topic: Fitness Center Management System

Group Leader: Sadik Munha (1931437042)

Ranking of the group members according to the overall contribution in the project task:

1. Sadik Munha (1931437042)
2. Mahabube Alahi Atik (2012109642)
3. Md. Rakibul Hasan (1912435042)
4. Sakib Reza (1911525042)

Submitted To:

Dr. Razib Hayat Khan (RHk1)

Assistant Professor

Department of Electrical and Computer Engineering (ECE)

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Project Summary:

The name of our project is “Fitness Center Management System”. Our project is basically for those who run the fitness center. Those who will operate the software will first get information about gyms in a certain area and be able to add or update the information of all the members of their center, calculate their income and expenditures, etc., and sell exercise equipment through this one software. On the other hand, users can buy exercise equipment at home, and they can become members of that organization by purchasing a membership package, and as a result, they will get some special benefits. Our main audience is health-conscious men, women, and children of all ages who like to change their lifestyle. They can schedule any time for a workout at their convenience. Just as they can buy products at home, they can also subscribe to a membership at home. Gym members and officials can access the system from anywhere with an internet connection, making it easier to manage the gym and access information. This automates many manual tasks associated with managing a gym, such as membership management, scheduling, and billing. This saves time and reduces the risk of errors. Often, regular gym usage is not possible. The online gym contains a lot of body-weight exercises that can be completed at home. However, gym members will get special discounts on the same equipment and products. Moreover, certain facilities, like personal trainers, online memberships, discount offers, etc., will be available to members only. On the other hand, those who run a fitness center used to need two different programs. One is to manage their gym data, and the other is if they are selling any products. But now they can do these two things together through software and, at the same time, register for membership online at home.

In our project, at first we made a presentation slide that included an introduction, our target audience, why we needed this application, function, and specialty for users and administrators. Then we have done a twelve-user story template, which includes: viewing and searching all the available gyms; performing user registration and signup; buying a membership package; buying equipment or products; setting up your own workout plans; assigning trainers personally; updating the user’s full account; managing the whole system (Admin); viewing the system view for gym owners; adding member details; uploading products; and managing trainers. Then we made the use case diagram for our project. After that, we worked on our user interface design. Ours is a web-based app. There’ll be pages like the home page, the sign-in and sign-up page, a page where one can search up nearby gyms using their location, and then they can also watch how much their membership fees are, then a page for the store displaying the products that different gyms and companies can sell, and an exclusive offer page where people can see the ongoing sales and offers on different products. After that, we worked on the class responsibilities collaborators (CRC) card and activity diagram for each of the use cases. Then we were done with our class diagram. It contains a total of 9 classes. They are: gym owner, trainer, time schedule, member, product, order, payment, user, and membership type. Here we have the class name, sub classes, super classes, responsibilities, and collaborators of each of the classes. Finally, we are done with our COCOMO effort estimation, budgeting, and two-time line charts. In this way we have completed our whole project tasks.

Functions of our project:

For User:

- View and search all the available gyms in an area
- Buy Equipment / Product
- Buy Membership Package
- Set Own Workout Planning
- Assigning Trainer Personally
- Update their full account

For Admin:

- Admin can manage the whole system
- Set up profile with different details
- Add members detail to his database
- Upload Products
- Can send notice
- Manage trainer

Contribution Table:

Group Member's Name	Contribution	Percentage of work
Sadik Munha	<ul style="list-style-type: none">• Presentation Slide• User Interface Design• CRC Card (Part 2)• Class Diagram• Budgeting• Final Project Report	50%
Mahabube Alahi Atik	<ul style="list-style-type: none">• CRC card (part 1)• User story template (part 2)• COCOMO Effort estimation	25%
Md. Rakibul Hasan	<ul style="list-style-type: none">• Use case diagram• Two Timeline chart	16%
Sakib Reza	<ul style="list-style-type: none">• User story template (part1)	9%

Pie Chart: Generated from Jira:

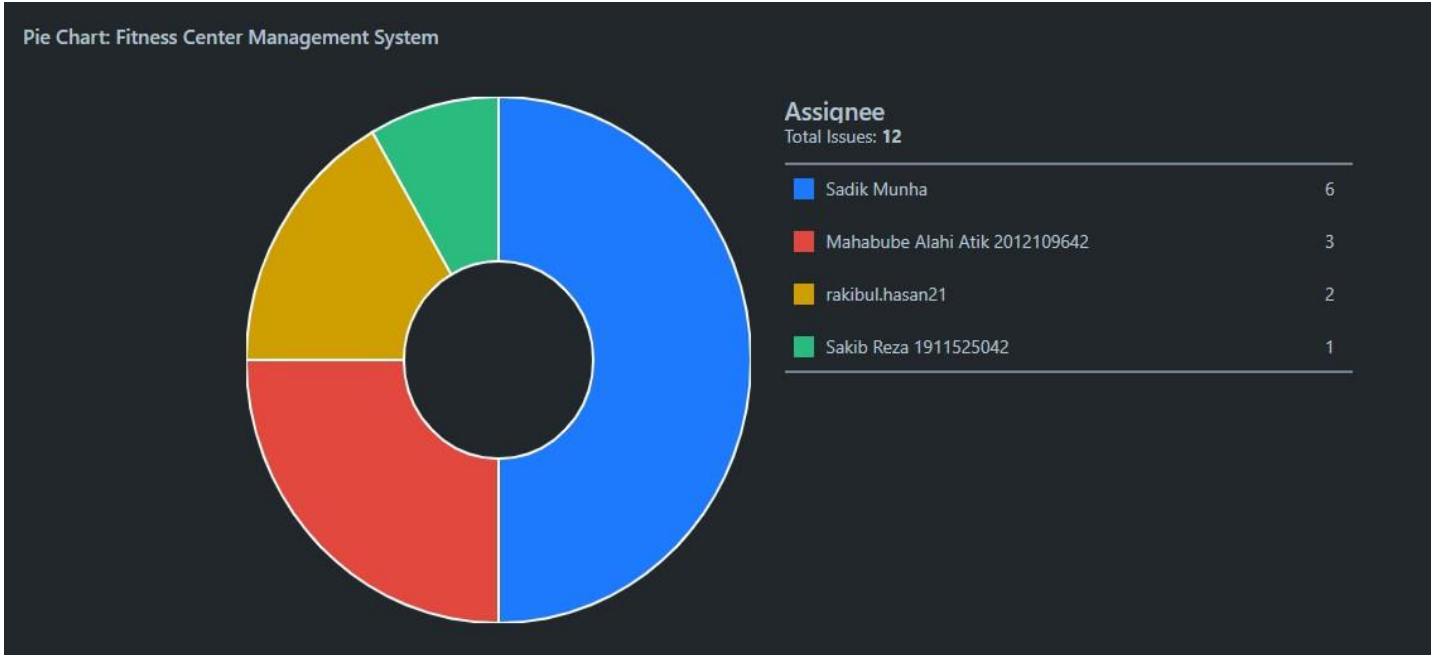


Fig: Pie Chart