AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH

Faculty of Science and Technology

FINAL TERM PROJECT REPORT

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1. PROBLEM DOMAIN

1.1 Background to the Problem

- o In this era of technology, customers want to buy products instantly and they do not want to waste their time traveling to the shops and vendors. They want to get an online based shopping platform where they can buy necessary products and also the vendors can sell each and every product to the customers that can make the highest profit for them.
- o It is also difficult for them to choose items in the shopping malls and also time-consuming. What they value most is time and the vendors also want to sell all the items at a limited time so they can get the most profit in their business. So, they need a technological solution. They want a web-based solution where they can choose their own choice of products online, make secured online payments, and also get timely product delivery at their home. Technological advancement can make it possible for people to sit in the convenience of their homes and still shop online without going to a physical shop.

1.2 Solution to the Problem

- o According to the fast-changing of the business environment nowadays, we have to be more effective and faster in responding to customers' needs to make them able to access our products instantly. This can be done by designing an E-commerce web application for online shopping, which sells variant fashions and goods to the customers either by instant payment or by payment on delivery. Many business houses carry out commercial transactions using websites. This makes the shopping process on the web familiar and makes E-commerce an accepted paradigm. To implement online shopping, a virtual store on the Internet is needed which allows customers to seek products and select them from a catalog. The customer needs to fill in some fields to order a specific product. The purpose of this project is to design and implement of online shopping website for clothes.
- o E-commerce shops have become part of our daily lives. Compare to traditional stores as one can compare the cost of a product with other e-commerce websites, and if a user dislikes any product he/she can return it. While we can make use of the current technology to overcome the problem with the existing system. E-commerce technology companies can use a flying robot, so when a user places an order, the company will send the product through the robot. The robot will find the user by using the GPS, and in this way, we can reduce the time to deliver a product. While before sending a product the e-commerce company will check whether the product is the same or not with the requested order.

    E-commerce is the future and good is a must for successfully boosting sales.
- o This E-commerce shopping website needs to be designed and developed by studying and understanding the server and client techniques, relational databases, and many programming languages such as HTML, CSS, JAVA, JAVASCRIPT, and PHP.

2. SOLUTION DESCRIPTION

2.1 System Features

1) The e-commerce website will have a homepage. On the homepage, there will be a search option where the customer can search for the necessary items.
2) In the lowest part of the homepage, there will be a quick search option where items will be searched more quickly.
3) In the homepage there will be a login button option, which is connected to the login page.
4) In the upper part of the home page there will be options for customer registration, payment for products, and registered member customer's list button.
5) There will be an upload file option where the customer can upload files of products they want and also will give a comment if he wants any items.
6) Customer registration button will be connected to the customer's registration page. Here the customer can enter his/her name, new password, phone number, address, and gender that will add him/her as a registered customer of that online shop. He/she can reset all the information.
7) The member customer button will be connected to the registered customer page. Here the vendor will log in with his id and password. He can update a customer's information and also can delete a customer's information. There is a logout option for the vendor and also going back to the homepage option.
8) In the login button the customer can get access to the customer's page. He/she can see any items, their quantity, and their availability, then order them of their choice. There is a logout option for the customer and also going back to the homepage option.
9) In the payment option the customer man will log in with his name and id, where the customer will pay with his

   credit/debit card. Here the system should be more secured so that no one can hack the customer's account information.
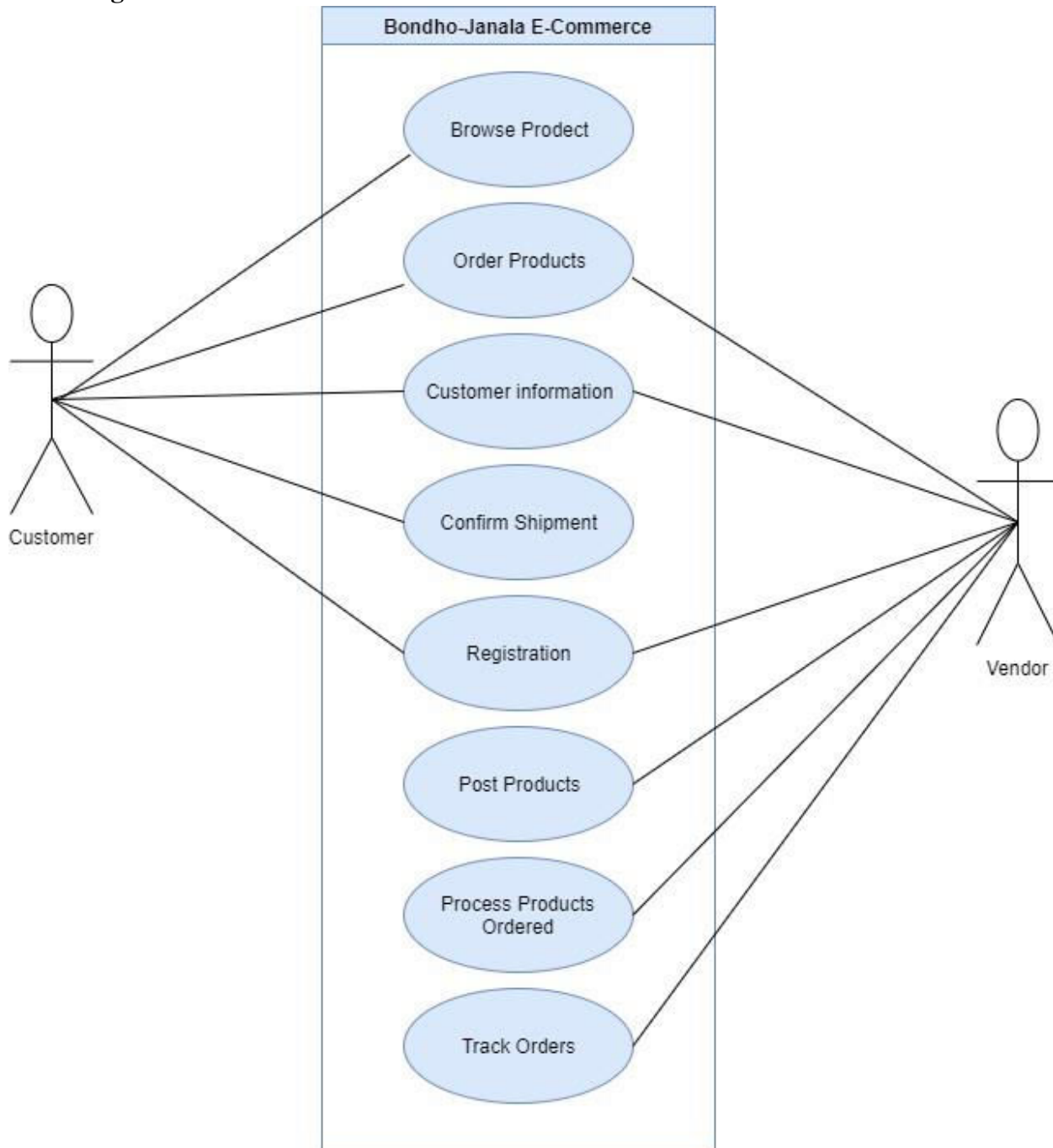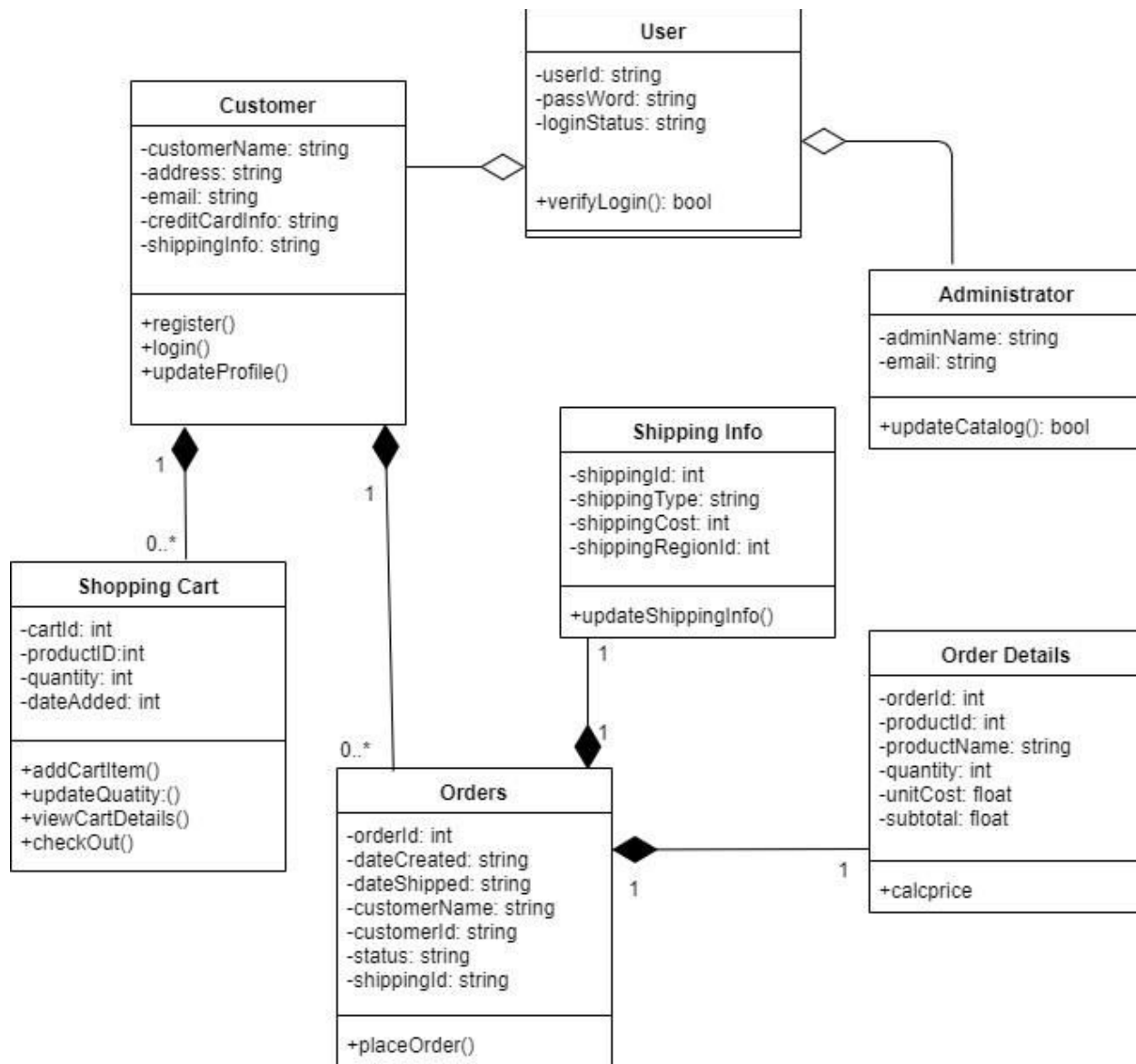
2.2 UML Diagrams

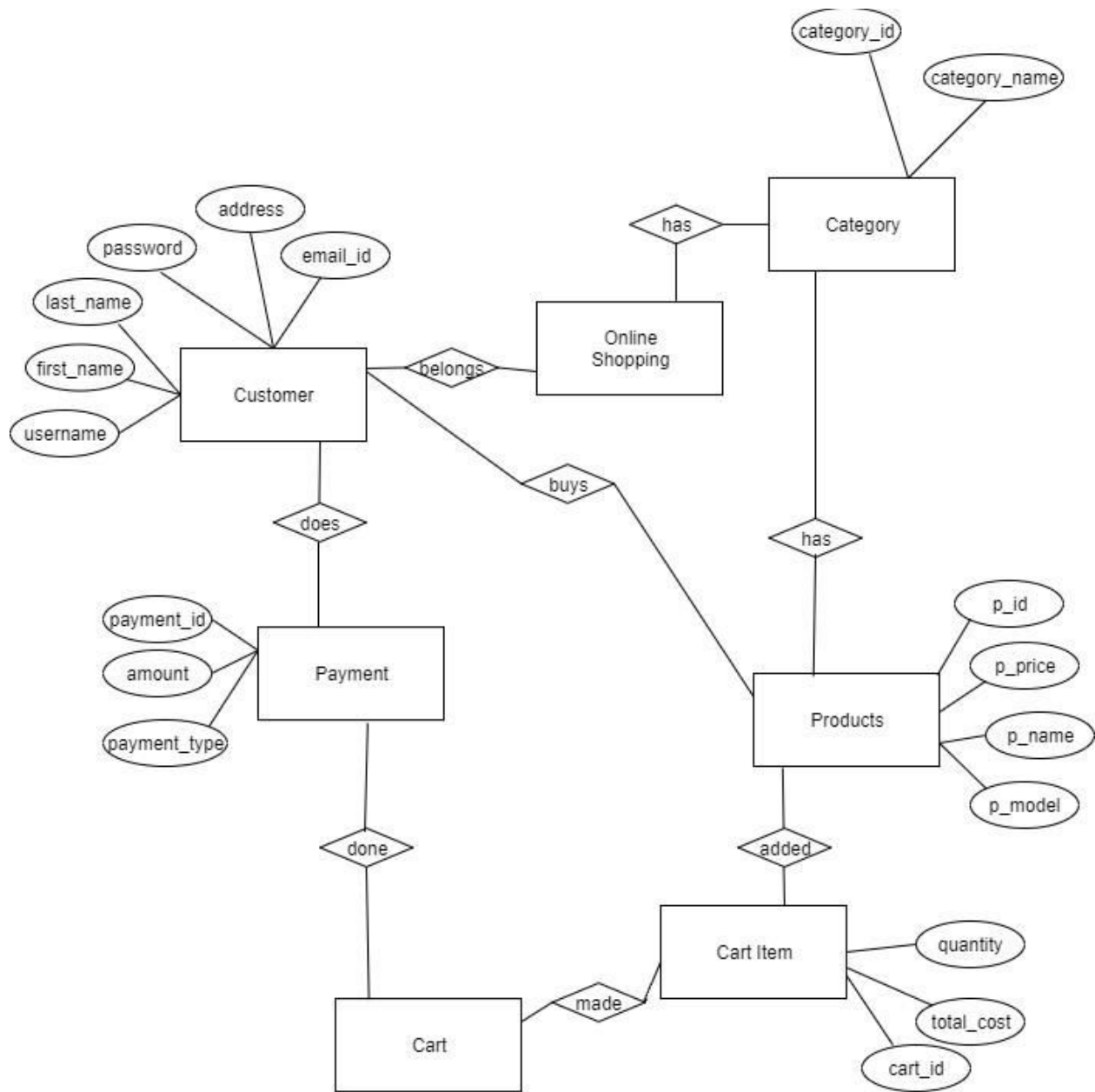

Fig 1: Use Case Diagram

Fig 2: Class Diagram

Fig 3: ER Diagram

3. Social Impact

We are currently working on a project named Bondho Janala E-commerce Project. The goal of our project we will provide web-based shopping. If anyone needs a shopping item, they can get the item using our system. We are developing a Bondho Janala E-commerce Website that includes the whole e-commerce management system to make the shopping of necessary items and clients easier and to ensure that clients receive appropriate care. Users will have access to a search engine that will help them find and arrange products of their choice. Vendors can utilize the system to add and delete products whenever they want. Each client can make an online order, and these orders will be held in their name. All payments will be tracked by the accounts section. After receiving the full service, the user will be able to give a review and express their opinion about it.

People's quality of life has improved as a result of these systems in all sectors of our society. Using an e-commerce management system, all procedures inside can be optimized and digitized.

This implies that, with the use of technology, we can easily manage all of the facilities and provide the finest service to the general public. Our project has a good impact on our society, we may infer. As a result, the relationship between the vendors and the customers is improved.

4. Development Plan with Project Schedule

The development plan includes:

1. Requirement Analysis,
2. Web Design,
3. Prototype Production,
4. Testing and Quality Assurance,
5. Implementation,
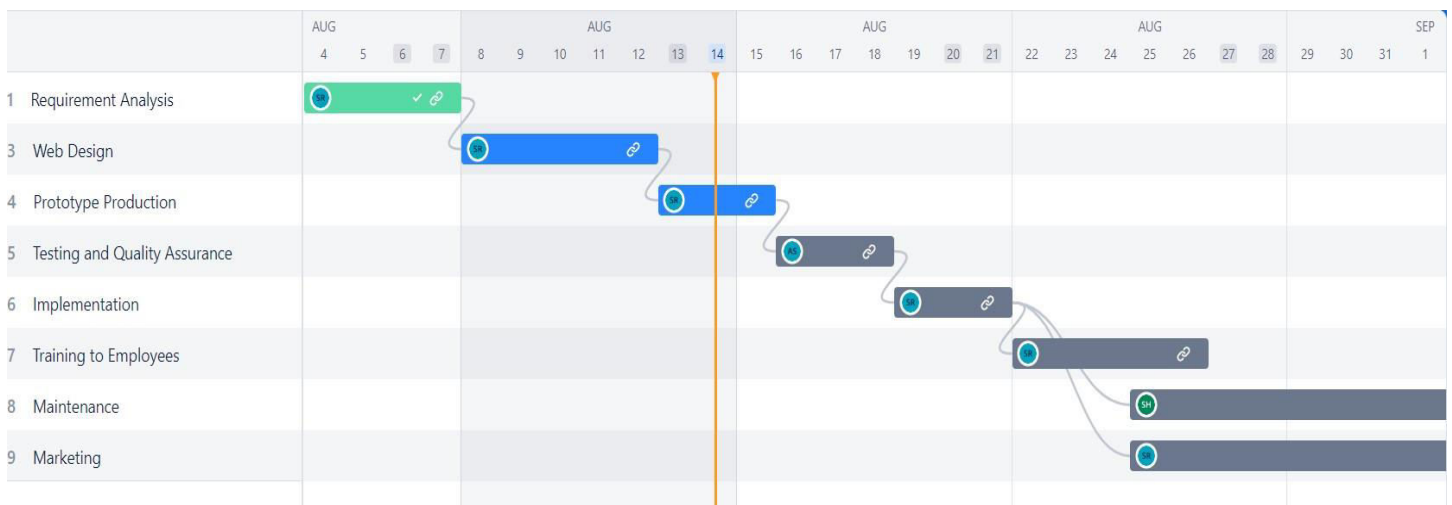6. Training for employees, 7. Maintenance,
8. Marketing.

Figure-1: Project Schedule.

| Items	Total (working Days)
1. Requirement Analysis 　　　1.1.Stakeholder Analysis 　　　1.2.Cost Benefit Analysis 　　　1.3.Technical Analysis 　　　1.4.Operational Analysis 　　　1.5.Risk Analysis	3
2. Web Design 　　　1.1.Design Layout 　　　1.2.Homepage Design 　　　1.3.Database Design 　　　1.4.Feature Design 　　　1.5.Module Design	4
3. Prototype Production	2
4. Testing and Quality Assurance	2
5. Implementation, 　　　5.1.DOMAIN and HOSTING 　　　5.2.Deployment Website	2
6. Training for employees, 　　　6.1.Training for admin staff on administrative 　　　　　operations	4
7. Maintenance, 　　　7.1.Daily Backup 　　　7.2.Update Product, Price, Offers 　　　7.3.Report and Data Analysis	8
8. Marketing. 　　　8.1.Web Marketing in Social Media 　　　8.2.Collaboration with others major eCommerce 　　　8.3.Search Engine Optimization	8
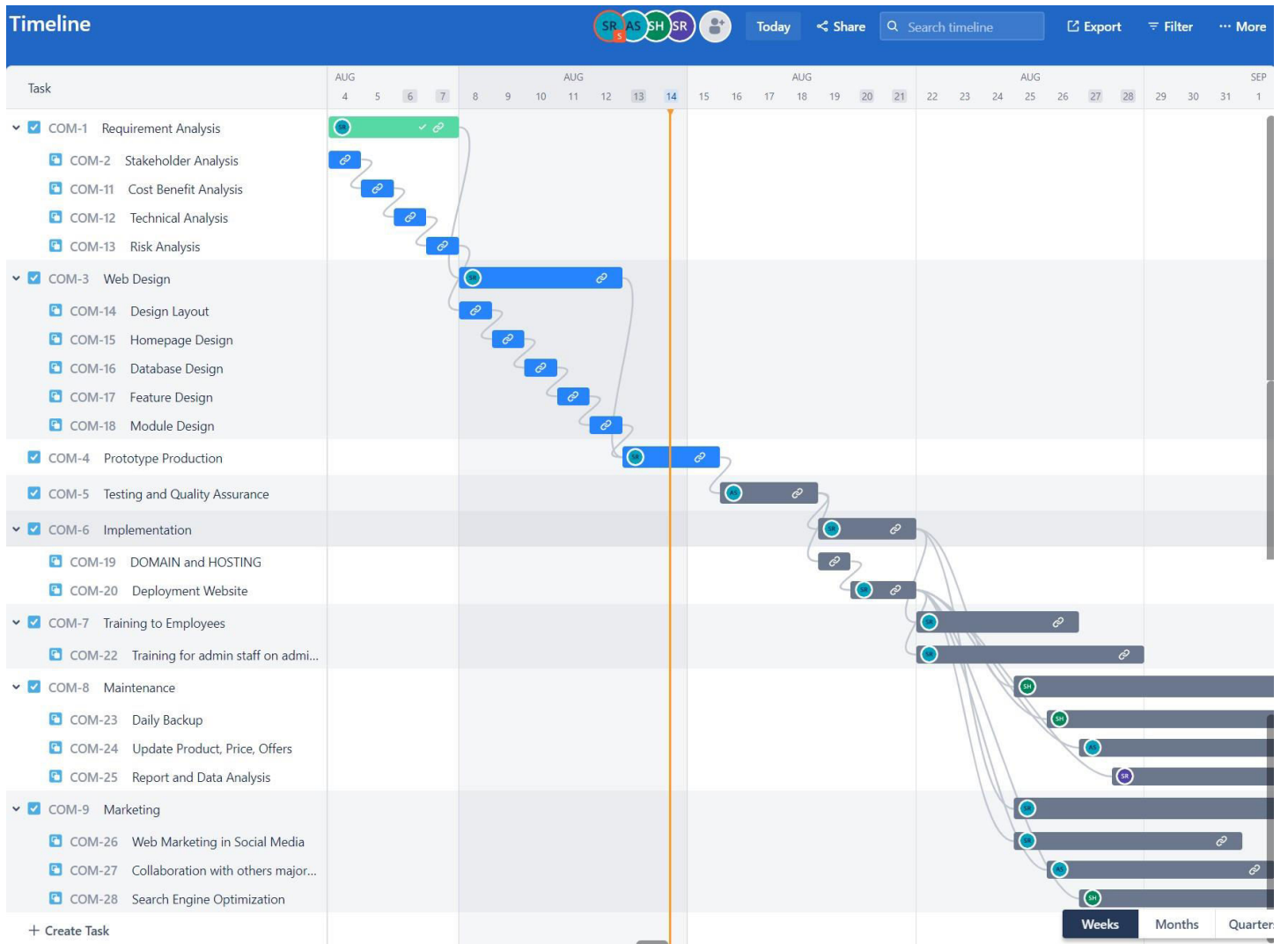
Figure-2: Full Project Schedule.
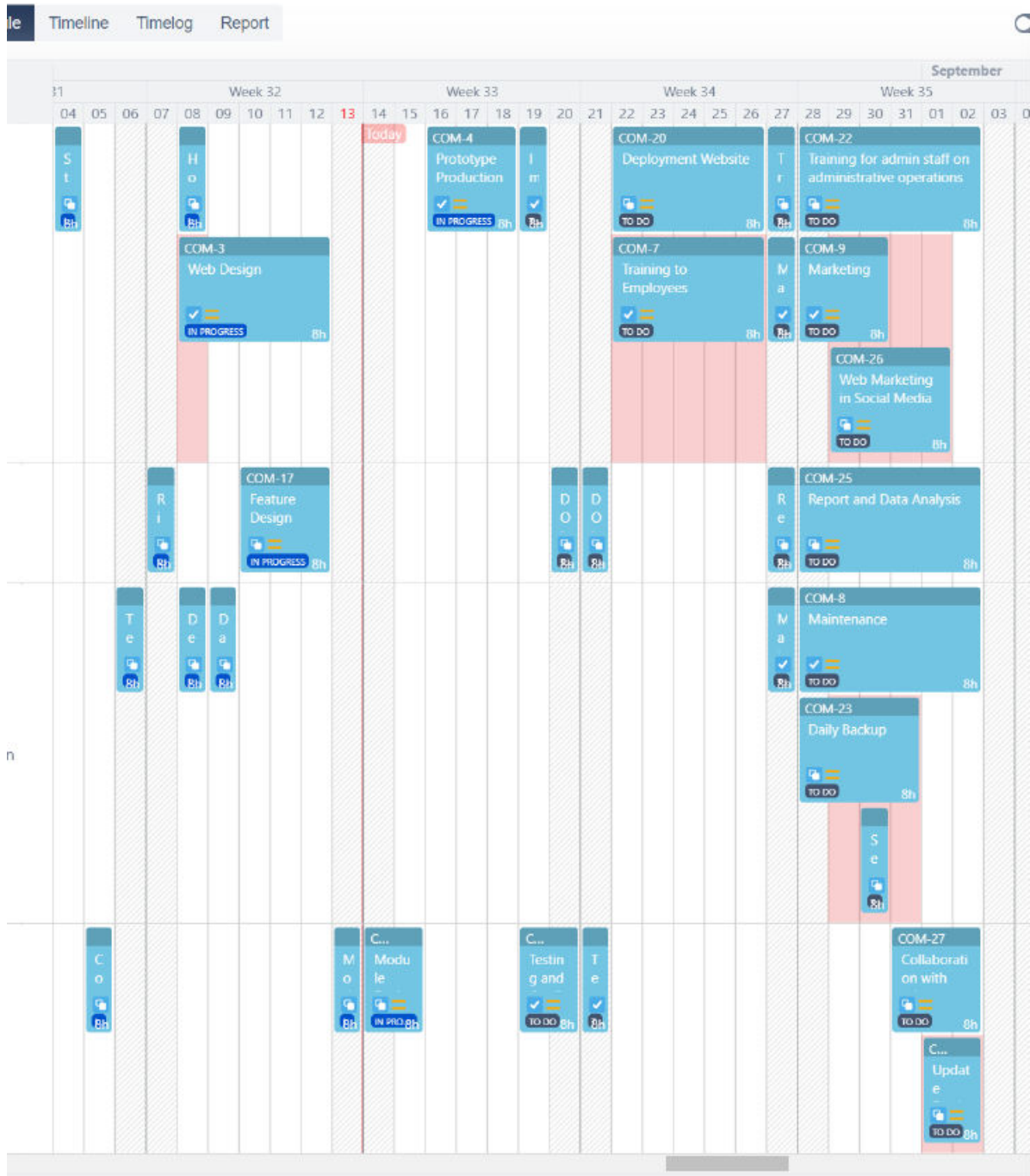
Figure-3: Project Schedule of teammates.

5. Marketing Plan

Short-term marketing plan: Short-term marketing plans are created to meet immediate needs, such as increasing sales during a particular season or promoting a new product. These types of strategies usually don't last very long because they are only designed to give a temporary boost. They may work well for a few months but then fall apart when those needs no longer exist. These activities are a form of advertising that is used to promote products or services. It is usually done in the short term, and it can be done through various media such as print ads, TV commercials, radio spots, billboards, etc. Shortterm marketing techniques include:

- Direct mail (mailing direct to potential customers)
- Print ads (printing advertisements in newspapers, magazines, brochures, flyers, etc.)
- Billboards (displaying signs along roadsides)
- Outdoor advertising (placing ads in public places like bus shelters, subway stations, etc.)
- Telemarketing (calling people at home using prerecorded messages)
- Online advertising (advertising online, including websites)
- Trade Shows
- Promotional Discounts
- Price reductions for limited-time

Long-term marketing plan: A long-term marketing plan is a comprehensive plan that helps one achieve his larger business objectives. This type of marketing strategy involves planning so that one knows what he is going to do next. He should develop a long-term marketing plan if he has more than one goal. For example, a person might want to sell more products, increase profits, get better customer service, etc. To make sure that he achieves all of his goals, he must put together a longterm marketing plan.

The long-term marketing activities include:

- SEO
- Content Marketing Initiatives

- Social Media

SEO: Search Engine Optimization (SEO) is a long-term marketing strategy that may take months or even years to implement, but it is the best source of B2B prospects. Being found online requires both understanding your target market and optimizing your website for the terms and phrases that your potential customers are most likely to use. Understanding SEO is a lifelong process that demands practice. Businesses should think about working with a specialist they can trust to update their website.

Content marketing Initiatives: Content marketing is a strategic marketing approach focused on creating and distributing valuable, relevant, and consistent content to attract and retain a clearly defined audience — and, ultimately, to drive profitable customer action.

Social Media: Social media can be utilized to accomplish ongoing goals as well as short- and long-term ones. In the short term, it can be used to monitor and manage your internet reputation. Social media can be used to continuously engage in online communities, spread knowledge, and support efforts that provide benefits.

Social media connects people throughout the world. Social media sites like Facebook, Twitter, Instagram, LinkedIn, and others are online forums where you may attract top talent and increase brand recognition among potential customers. You may stay in users' minds by frequently showing up on social news feeds. Interesting posts pique people's curiosity. People can recall helpful advice as well as where it originated.

Continuous Marketing Plan:

Continuous Advertising: Continuous advertising is a marketing strategy in which the consumers of a good or service are continuously reminded of its need, especially during periods of low or non-existent sales. Advertising runs steadily over the campaign period with very little differentiation. Continuous advertising is a kind of scheduling model. Scheduling refers to the pattern of advertising timings of a brand aiming to coincide with favorable selling periods. The other two scheduling models are 'flighting' and 'pulsing' advertising. Continuous advertising is prevalent in service and packaged goods which need continuous reinforcement so that the audience is influenced at the point of purchase due to top-of-mind recall of that particular brand. The pattern of advertising may involve short gaps at regular intervals or long gaps, throughout the year. Traditional media includes print, television, and radio. Advertising, whether on billboards or on the internet, is regarded as an indication of the goods or services.

Print, television, and radio are examples of traditional media. Advertising is considered a sign of the product or service, whether it's billboards on the side of the road or internet adverts for a brand.

6. Cost and Profit Analysis

Service	Daily cost (BDT)	No. of Days	Total cost (BDT)
Website Design/Graphics	5250	6	31500
Front-end developer	800	10	8000
Back-end developer	1000	20	20000
Quality Assurance	5250	4	26250
Business Analyst	2200	30	66000
Cloud Hosting	130	60	7800
eCommerce Website Maintenance	780	60	46800
SEO	3120	52	162240
Advertising cost			80,000
Overhead cost			28410
Total cost			BDT 477000

Profit Analysis:

Almost 60 days have been appointed to complete the software. By summing up all the costs, it becomes 477000 (BDT).

The client needs to pay 30,000 for the website. They will get the full website at this price.

The first month of website support is free, then it will cost 2000 per month. So, in a year the support cost will be, (2000*11)=22,000.

Among 100 business owners, 70 of them are expected to use the eCommerce site. So, expected payment is (70*30000)+(70*22000)=3640000.

If the total cost is deducted then the profit for the year is: 3640000 - 477000 = 3163000 (BDT)

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