**Introduction:**

Hello everyone.  
Today our presentation is on our project Online Comparison System. In this presentation I will describe all the work on this project through this whole semester. In this semester, we have done idea generation, use case diagram, activity diagram, class diagram, user story card, ui design, jira, git, scheduling, budgeting. This is group three and the members are Zishan, Fahim, Touhida and myself.

**Project Idea:**

First, we build our project idea discussing with the group members. The project is on online comparison system where we can compare various products available in the market. Our goal is to make it easy for the customers and sellers to know about all the products, their qualities, availability and other information about a particular product. Here a customer can view available products based on their needs and preferences and compare them. Customer can also add items to Wishlist so that if that item is on sale or be available, we can be notified. But to use the Wishlist and notification feature, he/she has to register on the website. Sellers can also get idea about their competitors as well as the whole market.

**Use Case:**

A use case diagram is a dynamic or behavioural diagram in UML. Use case diagrams model the functionality of a system using actors and use cases. Use cases are a set of actions, services, and functions that the system needs to perform.

Use case diagrams are valuable for visualizing the functional requirements of a system that will translate into design choices and development priorities.

our next task was to prepare use case diagram for this project. There are three actors – Customer, Registered customer and System. Registered customer has all the features of a regular customer in addition to Wishlist and getting notified feature of the website. A regular customer can search products, view products depending on their preferences, sort them or view product reviews.

If a customer wants to sign up, he/she has to provide his personal info and must verify his phone number or email. A registered customer can submit reviews and add products on Wishlist. There will be two options for notifications – to get stock update, and to get discount update. A registered Customer can use both features if they want to.

**Activity:**

Activity diagram is another important behavioural diagram in UML diagram to describe dynamic aspects of the system. Activity diagram is essentially an advanced version of flow chart that models the flow from one activity to another activity.

As we had 5 use cases, we prepared an activity diagram for each of them (they are: Show product, search product, signup, Wishlist, notify)

**Class diagram:**

Then we made a class Diagram for our project. A class diagram models the static structure of a system. It shows relationships between classes, objects, attributes, and operations.

There are three main classes in our diagram. They are CUSTOMER, SYSTEM and REGISTEREDCUSTOMER. Registered Customer class is a generalized form of customer class.

Customers and Registered Customers are Associated with the System. Customer searches products in the system. Between customer and system there is a relational class called search filtering.

Registered Customers gets notified by the system. Between registered customer and system there's also a relational class called notification.

We have also shown the multiplicity of the main classes.

**User story card:**

Another task we did was the user story card. A user story is an informal, general explanation of a software feature written from the perspective of the end user or customer. The purpose of a user story is to articulate how a piece of work will deliver a particular value back to the customer.

We made some story card to express some basic functionalities and requirements of our project.

**UI Design:**

Then we prepared an UI design for our website. UI design is the process of creating the look and feel of an application’s user interface. The user interface (UI) encompasses both the appearance and interactivity of an app.

We showed 5 different important pages – Registration page, home page, Category page, Wishlist, product search page. We used adobe Experienced Design for creating it.

**Jira:**

Then we learned about Jira and implemented in on the website. Jira is a website/tool offered by Atlassian.com to Plan, track, and manage your agile and software development projects. Here we can Customize our workflow, collaborate, and release great software.

First our group leader created an account on Atlassian. Then he invited other group members via email. Then he created a team. After that, he created a sprint and created issues under it. As the sprint starts, the issues were shown in backlog. There are three stages of the issues – to do, in progress and done. Each issue was assigned by the group leader to a member. After all the issues were done, project leader completed the sprint and the issues of that sprint were not on backlog anymore. Then the project leader created another sprint and created rest of the issues. Then we created OCS Dashboard and shown different gadgets like pie chart, Heat map, activity stream etc. From here we get to know about the project flow and progression.

**Git:**

Git is the most commonly used version control system which tracks the changes we make to files, so we have a record of what changes has been done. **Git** makes collaboration easier and allow changes by multiple people and later be merged into one source. We used GitHub which is a cloud-based hosting service that lets you manage Git repositories.

Git was an individual task for everyone. We have used both the git bash and desktop app. We created a repository on github. First, we connected git to our local repository. Then we created folder and initialized an empty git using the bash. Then we created new file under the repository and made some changes. Then we staged the files (using add command) to make them ready to be committed. We can view git status anytime (using status command). Then we have to commit Adding commits keep track of our progressions. We can add a message with the commit. There might be multiple branches under a repository. After committing, we can push the branch to github.

Now if another user wants to update his local file from github repository, he has to pull that branch from github.

**Schedule:**

A project schedule is a timetable that organizes tasks, resources and due dates in an ideal sequence so that a project can be completed on time.

A project schedule includes the following:

1.A project timeline with start dates, end dates and milestones

2.The work necessary to complete the project deliverables

3.The costs, resources and dependencies associated with each task

4.The team members that are responsible for each task

We did the scheduling for our project. We created a timeline chart.

First, we divided the whole project into a few tasks and then again divided the tasks into subtask. We followed the effort allocation *40-20-40* rule for the tasks.

**Project Estimation:**

By seeing the budgeting of the project, we can see the project type is organic. Because the project is organic the Coefficient factors like P (Project Complexity)=1.05 and T(SLOC-dependent coefficient) =0.38. And the source line of code is 1000 line. From the math we can see per person will be paid 26 people per month for the project work. The development time is 9 months for the full project. At least 4 members are required to fulfil this project. We are paying 700 taka for each developer per working hour. So, our total developer salary is 15,12,000. For the requirement analysis we need 5 weeks of time.

Per persons analysis fee is 300 taka and total analysis fee is 90,000 taka. Our transportation cost estimation is 10,000 taka and training and hardware expenses are 1,00,000 taka. Rent expense are estimated up to 90,000 taka in 9 months. Total utilities in 9 months will cost up to 90,000 taka.

Maintenance fee is up to 60,000 taka. So, our total expense stand is 18,82,000 taka. Our profit will be 20% so it stands up to 3,76,400 taka. So, our project budget will be 22,58,400 taka.

**Conclusion:**

Overall, we’ve learnt a lot of things from this project like UI Design, JIRA, GIT, Project Scheduling, Budgeting and lot of other things. Which will help us in managing bigger projects in professional work fields.

***THANK YOU.***