

Sri Lanka Institute of Information Technology



Software Engineering | SE2030

2025 | Year 2 Semester 1

Group ID: 2025-Y2-S1-MLB-B6G2-07

Web-based Musical Instrument Selling System

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B.Sc. (Hons) in Information Technology

System Requirements

The purpose of this system is to provide a centralized online platform that simplifies the entire process of buying and selling musical instruments. It enables customers to browse, purchase and track orders easily from home while empowering staff to manage inventory, process orders and handle deliveries efficiently all in one place. By replacing manual paperwork with automated digital processes, the system saves time, reduces errors and enhances operational speed. Ultimately, it is designed to facilitate faster sales, improve customer satisfaction and support business' growth.

Users

- Customers – Companies or individuals purchasing musical instruments over the internet.
- Sales staff – Update stock, handle customer orders and manage product details.
- Manager – Oversee the income charts and assign staff tasks.
- Suppliers – Provide inventory, spare parts and accessories.
- Delivery Team – Conduct shipping and delivery of packages to the customers.
- Administrator – Oversee the system operations and manage users.

Functional Requirements

- Admin Management- Allows to manage staff, customers and services.
- Product Display- Show instrument details, images, and allow filtering by type, brand, price.
- Online Ordering and Payment- Place orders and pay online safely
- Stock Management- Monitor and update inventory in real-time and trigger low-stock alerts
- Order Tracking- Provide real-time status updates and delivery tracking via logistics integration.
- Financial Reporting- View income, expenses, and profit clearly.

Non-Functional Requirements

- Performance- All transactions and queries should be executed within less than 2 seconds.
- Security- Secure encryption schemes must be employed for payment processing and storage of user data.
- Usability- The interface should be easy to use every time and everywhere.
- Readability- The system should have 99.9% uptime to reduce interruptions.

Constraints/Assumptions

- Third-Party Dependence Involvement with third-party payment gateways often leads to downtime should the services encounter issues.
- Platform Limitation: Being web-based, the system excludes users without internet access, limiting its reach.
- Internet Requirement: The functionality depends on a stable internet connection, which can be a problem in remote areas.

Interactions with the Bot

Our project is a web based musical instrument selling system

 Project Discussion Bot - Year2

Thanks! That's a good start.

Let's name your project "**TuneMart – Online Musical Instrument Store**".

This system will help people buy musical instruments through a website. Customers can see products, place orders, and make payments online. The company can manage products, orders, and customers easily.

Your client company is called **TuneMart Lanka (Pvt) Ltd**, based in Sri Lanka. They sell guitars, keyboards, drums, and other musical items.

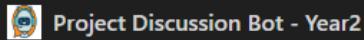
Here are 5 people from TuneMart Lanka who will help you gather requirements:

1. **Mr. Nuwan Perera – Sales Manager**
2. **Ms. Dilki Fernando – Website Administrator**
3. **Mr. Ramesh Jayasinghe – Inventory Supervisor**
4. **Ms. Tharushi Madushani – Customer Support Officer**
5. **Mr. Chamika Lakmal – Finance Executive**

You can now ask questions to any of them. Just type your question, and I'll bring the right person to answer.



we have decided users of our system are customer,sales,staff,delevery team,manager,supplier and IT admin



Thanks! That's very helpful.

Let's name your project "**MelodyMart – Web-Based Musical Instrument Selling System**".

Your client company is **MelodyMart Lanka (Pvt) Ltd**, located in Sri Lanka. They sell musical instruments like guitars, drums, keyboards, and more. They want a website where customers can buy instruments, and staff can manage orders, deliveries, and suppliers.

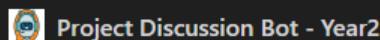
Here are 5 people from MelodyMart Lanka who will help you gather requirements:

1. Mr. Sanjeewa Ranasinghe – Sales Officer
2. Ms. Nadeesha Alwis – Delivery Team Leader
3. Mr. Lahiru Jayawardena – IT Administrator
4. Ms. Harshani Silva – Supplier Coordinator
5. Mr. Dilan Perera – Store Manager

You can now ask questions to any of them. Just type your question, and I'll bring the right person to answer.



According to the relevant stakeholders what would be the main features



Thanks! Based on your idea, your project is now called "**MelodyMart – Web-Based Musical Instrument Selling System**".

This system is for a company in Sri Lanka that sells musical instruments online. Customers can buy instruments, and staff can manage orders, deliveries, and suppliers.

Here are 5 people from **MelodyMart Lanka (Pvt) Ltd** who will help you gather requirements:

1. Mr. Sanjeewa Ranasinghe – Sales Officer
2. Ms. Nadeesha Alwis – Delivery Team Leader
3. Mr. Lahiru Jayawardena – IT Administrator
4. Ms. Harshani Silva – Supplier Coordinator
5. Mr. Dilan Perera – Store Manager

You can now ask questions to any of them. You just need to type your question, and I'll bring the right person to answer it. 😊

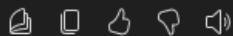
You asked about the **main features**. Let's ask the right person for that. One moment...

 Mr. Dilan Perera – Store Manager:

Hello! I'm happy to help you.

For our system, we need features like product listing, customer registration, order placing, payment, and delivery tracking. Also, we want to manage stock, suppliers, and staff accounts.

You can ask me more if you like.



admin management, product display, online ordering and payment, stock management, order tracking , financial reporting are the main features we are focusing on our system

 Project Discussion Bot - Year2

Great! Your main features are clear now:

Admin management, product display, online ordering and payment, stock management, order tracking, and financial reporting.

Let's now set up your client company and team.

Your project is called "**MelodyMart – Web-Based Musical Instrument Selling System**".

The client company is **MelodyMart Lanka (Pvt) Ltd**, based in Sri Lanka. They sell musical instruments like guitars, drums, and keyboards through a website.

Here are 5 people from MelodyMart Lanka who will help you gather requirements:

1. Mr. Ruwan Fernando – Sales Manager
2. Ms. Thilini Jayawardena – Delivery Team Leader
3. Mr. Kasun Abeysekara – IT Administrator
4. Ms. Nimesha Perera – Supplier Coordinator
5. Mr. Chamath Silva – Finance Officer

You can now ask questions to any of them. Just type your question, and I'll bring the right person to answer.



Can you explain what the system should do?

 Project Discussion Bot - Year2

Thanks for your question! Let me explain your system in a simple way.

Your project is called "**MelodyMart – Web-Based Musical Instrument Selling System**".

It is for a company in Sri Lanka that sells musical instruments like guitars, drums, and keyboards.

The system will help different users do their work easily:

- **Customers** can see products, place orders, and make payments online.
- **Sales staff** can manage customer orders and help with sales.
- **Delivery team** can see delivery details and update delivery status.
- **Manager** can check reports and control the system.
- **Suppliers** can update product stock and prices.
- **IT Admin** can manage users, fix problems, and keep the system safe.

Now, here are 5 people from MelodyMart Lanka who will help you gather requirements:

1. Mr. Ruwan Fernando – Sales Manager
2. Ms. Thilini Jayawardena – Delivery Team Leader
3. Mr. Kasun Abeysekara – IT Administrator
4. Ms. Nimesha Perera – Supplier Coordinator
5. Mr. Chamath Silva – Finance Officer

You can ask questions to any of them. Just type your question, and I'll bring the right person to answer. 😊



What would be the operations performed in admin management?

 Project Discussion Bot - Year2

👋 Hello again! Let me bring in the right person to answer your question.

 Mr. Kasun Abeysekara – IT Administrator:

Hello! I take care of the admin side of the system.

In admin management, we need to do things like creating user accounts, giving access levels, removing users, and checking system activity. I also make sure the system is safe and working well. If something goes wrong, I fix it.

Let me know if you want more details about any part. 😊

What would be the operations performed in product display?



Project Discussion Bot - Year2

Thanks for your question! Let me explain with help from the right person.

👤 Ms. Nimesha Perera – Supplier Coordinator:

Hello! I help to manage the products we sell.

In product display, the system should show all musical instruments clearly. Each product must have a name, photo, price, and short description. Customers should be able to search, filter, and click to see more details.

We also want to show if the item is in stock or not. If it's out of stock, it should say so.

Let me know if you want to ask more about products. 😊

What would be the operations performed in online ordering and payment?



Project Discussion Bot - Year2

👋 Hello again! Let me bring in the right person to answer your question.

👤 Mr. Ruwan Fernando – Sales Manager:

Hi! Good question.

In online ordering and payment, the customer first selects the instrument they want. Then they add it to the cart and give their delivery details. After that, they choose a payment method like card or bank transfer and confirm the order.

The system should send a message to the customer after the payment is done. It should also show the order to our staff so we can prepare it for delivery.

Let me know if you want to ask more about this. 😊

What would be the operations performed in stock management?

 Project Discussion Bot - Year2

Thanks for your question! Let me explain with help from the right person.

 Mr. Nuwan Senanayake – Store Supervisor:

Hello! I manage the stock in our company.

In stock management, I need to add new products when they arrive. I also update the quantity when items are sold or returned. If something is running low, the system should show a warning. I also check expiry dates and remove old items if needed.

Let me know if you want to ask more about stock. 😊

What would be the operations performed in order tracking?

 Project Discussion Bot - Year2

Thanks for your question! Let me bring in the right person to help you.

 Ms. Thilini Jayawardena – Delivery Team Leader:

Hello! I'm happy to explain.

In order tracking, the system should show the status of each order. For example, it can say "Order Received", "Preparing", "Out for Delivery", or "Delivered". Customers can check this from their account. We also update the status when the delivery team moves the item.

If there is a delay, we can add a message. This helps customers know what is happening.

Let me know if you want to ask more. 😊

What would be the operations performed in financial reporting?



Project Discussion Bot - Year2

👋 Hello again! Let me bring in the right person to answer your question.

👤 Mr. Chamath Silva – Finance Officer:

Hi! I handle the money side of the business.

In financial reporting, the system should show us daily sales, total income, and refunds. I also need to see reports for each month, and compare income and expenses. This helps us know if the business is doing well or not.

If you want, I can explain more about the types of reports we need. 😊

What are the non functional requirements of the system should be?



Project Discussion Bot - Year2

Thanks for asking! Let me explain with help from the right person.

👤 Mr. Kasun Abeysekara – IT Administrator:

Hello! I'll tell you about the non-functional parts.

These are things that help the system work better. It should be fast, so pages load quickly. It must be safe, so customer data is protected. It should work all the time without crashing. Also, it must be easy to use, even for people who are not good with computers.

Let me know if you want more examples. 😊

Can you give me examples?

 Project Discussion Bot - Year2

Thanks for asking! Let me explain clearly for your project.

Your system is called **MelodyMart – Web-Based Musical Instrument Selling System**. It helps customers buy musical instruments online, and staff manage everything from products to payments.

Now I'll give you examples of **non-functional requirements**. These are not about what the system does, but **how well** it works.

Let's ask the right person to explain.

 Mr. Kasun Abeysekara – IT Administrator:

Hello! I'll give you some simple examples.

One example is **performance**. The website should load fast, even if many people use it at the same time.

Another is **security**. Customer data like passwords and payments must be protected.

Also, we need **usability**. The system should be easy to use for everyone, even first-time users.

We also want **reliability**. The system should work all the time without crashing.

Let me know if you want more examples or details. 😊



 Mr. Ruwan Fernando – Sales Manager:

Hello! The purpose of this system is to help customers buy musical instruments easily from our website. It also helps our staff manage orders, payments, stock, and deliveries in one place. This will save time and make our work faster and better.

You can ask me more if you like. 😊

 Mr. Ruwan Fernando – Sales Manager:

Hello! I'm happy to explain.

This system will help us sell instruments faster and easier. Customers can buy from home, and we can manage orders without paperwork. It saves time, reduces mistakes, and helps us grow our business.

Let me know if you want to ask more. 😊

In your opinion what would be the system limitations of the system?



Project Discussion Bot - Year2

Thanks for your question! Let me explain clearly.

Your project is called **MelodyMart – Web-Based Musical Instrument Selling System**.

It helps customers buy musical instruments online, and staff manage products, orders, payments, and deliveries.

The client company is **MelodyMart Lanka (Pvt) Ltd**, based in Sri Lanka. They sell guitars, drums, keyboards, and more.

Here are 5 people from the company who will help you gather requirements:

1. Mr. Ruwan Fernando – Sales Manager
2. Ms. Thilini Jayawardena – Delivery Team Leader
3. Mr. Kasun Abeysekara – IT Administrator
4. Ms. Nimesha Perera – Supplier Coordinator
5. Mr. Chamath Silva – Finance Officer

Now let's ask the right person about **system limitations**.



Mr. Kasun Abeysekara – IT Administrator:

Hello! I'll tell you what I think.

One limitation is internet speed. If the customer has slow internet, the website may not work well.

Another is payment issues. If the bank system is down, online payments may fail.

Also, we cannot deliver to every area in Sri Lanka. Some places are too far.

Let me know if you want to ask more. 😊



Mr. Kasun Abeysekara – IT Administrator:

Hello again! I'll give you more examples of limitations.

Sometimes, the system may not work well on very old phones or browsers. Also, if too many users use the system at the same time, it might become slow.

We also depend on third-party services like payment gateways. If they go down, our system can't process payments.

And finally, if there is no internet, users can't access the system at all.

Let me know if you want to ask more. 😊