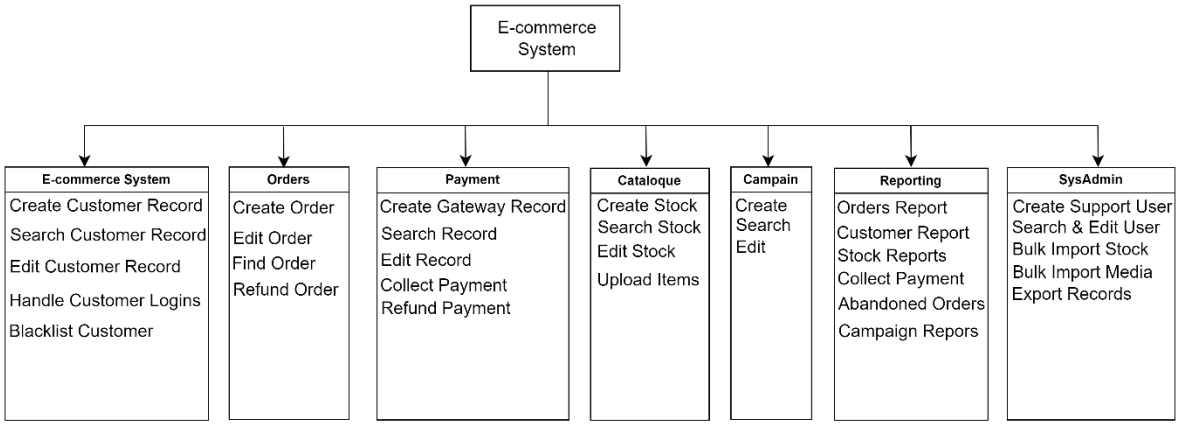
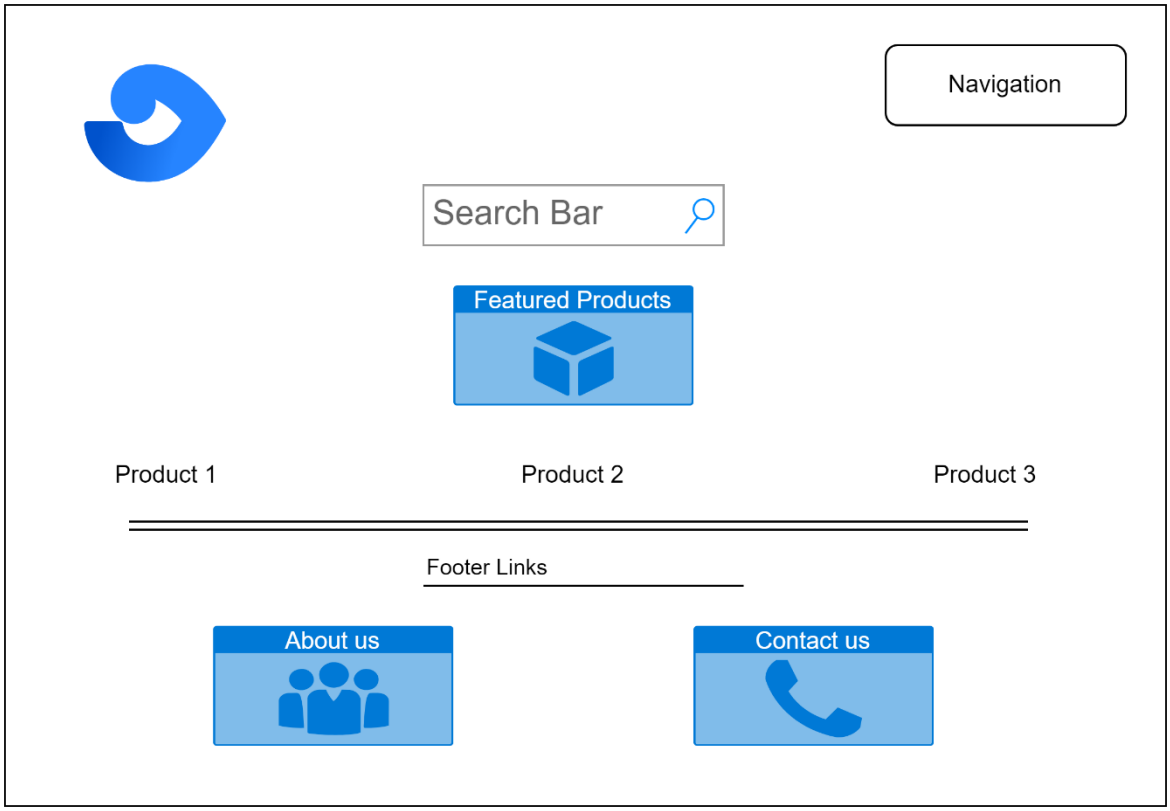
Scenario 1

1. Create a Functional decomposition diagram for the above scenario.

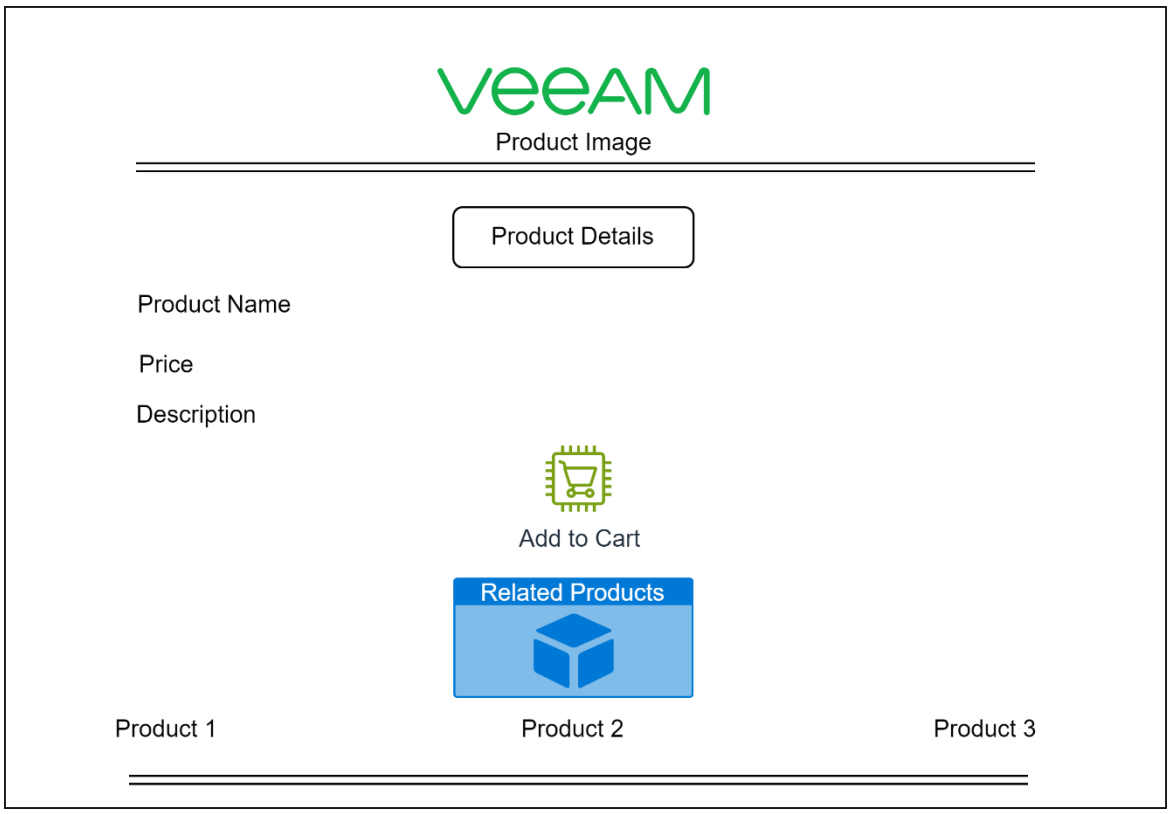


2. Create a user interface(s) / mock-up based on the functionality you can deduce from the above scenario.

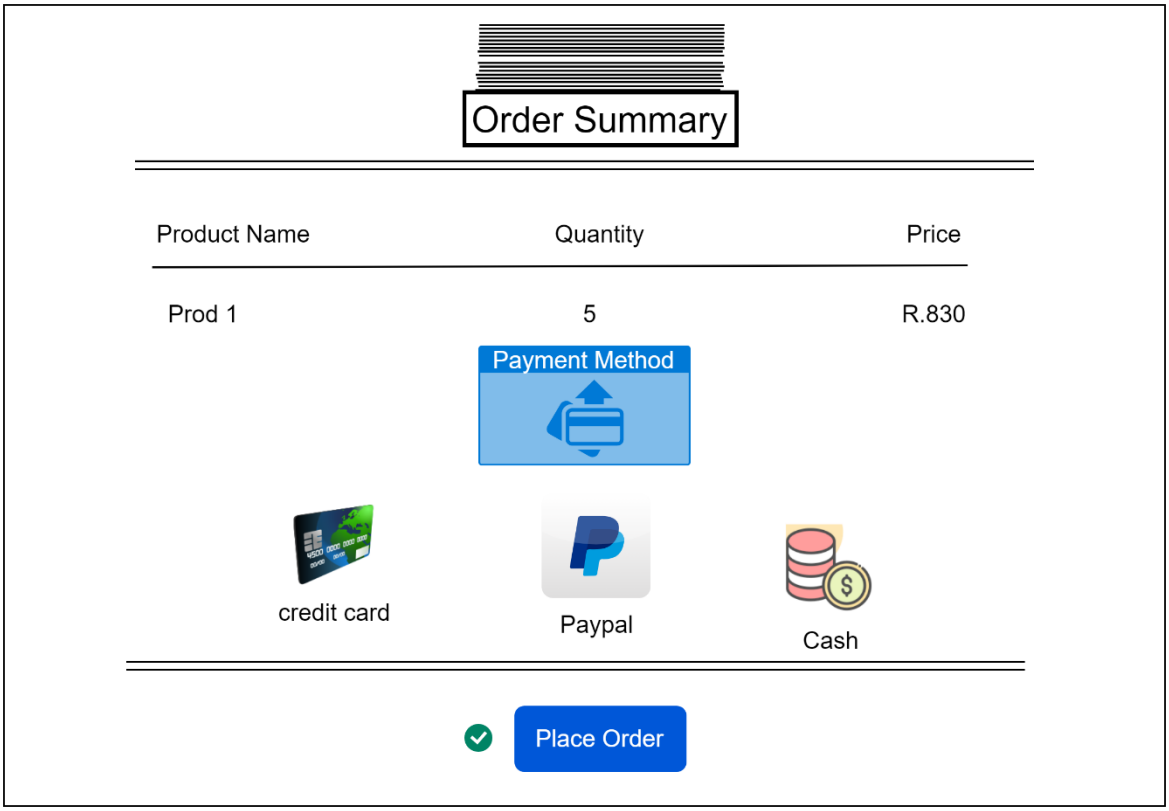
- **Homepage Mock-up:**



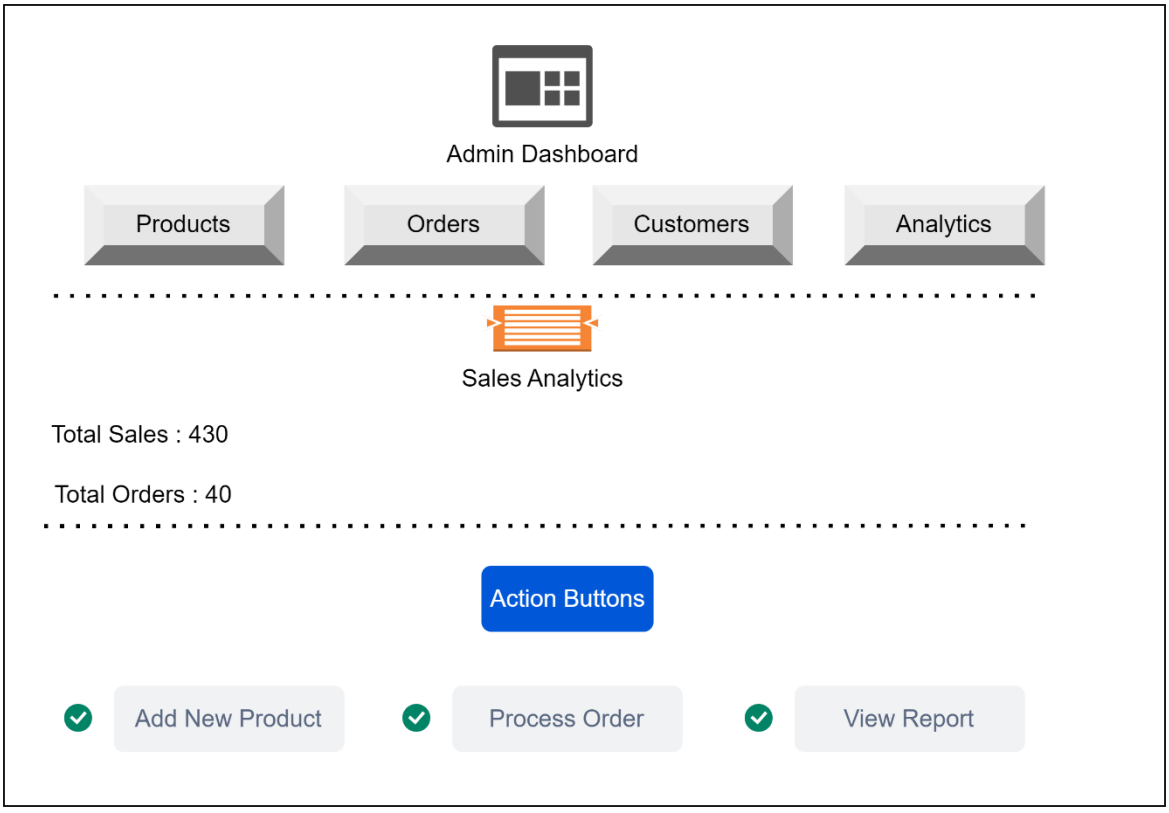
- **Product Page Mock-up:**



- **Checkout Page Mock-up:**



- **Admin Dashboard Mock-up:**



Scenario 2

1. Detail in point form the process you would follow to gather the information you need to detail the user stories and acceptance criteria.

    - **Review Existing Documentation:**
        - Go through the RFP document and current e-student system information to understand what's needed.

    - **Identify Stakeholders:**
        - Identify key people like students, faculty, admin staff, and IT support who will be affected by the system changes.
        - Schedule meetings with representatives from each group.

    - **Prepare Questions and Discussion Points:**
        - Write down open-ended questions to understand user needs and issues.
        - Prepare key points to guide conversations with stakeholders.

    - **Conduct Stakeholder Interviews:**
        - Arrange interviews with key stakeholders.
        - Ask open-ended questions to gather detailed insights and suggestions.
        - Take notes on specific use cases and preferences.

    - **Distribute Surveys and Questionnaires:**
        - Send out surveys to a wider student audience to gather more data.
        - Analyse the results to find common needs and preferences.

    - **Observe Users and Conduct Usability Testing:**
        - Watch students using the current system to spot problems.
        - Run usability tests on the current system and any new designs to get feedback.

    - **Analyse and Consolidate Information:**
        - Review and combine all the information from interviews, workshops, surveys, and observations.

    - **Draft Initial User Stories and Acceptance Criteria:**
        - Write user stories based on the gathered information, making sure they're clear and focused on what users need.
        - Define acceptance criteria for each user story to ensure they're specific and measurable.

- **Collaborate with the Development Team:**
  - Have meetings with the development team to discuss the user stories and acceptance criteria.
  - Ensure they fully understand the requirements.

2. Detail the questions you would ask the customer to get the needed information for the user stories and acceptance criteria related to RFP Requirement No. 1 ONLY.

   - **Current Process:**
     - How do students buy parking passes now?
     - What problems do students have with the current way of buying parking passes?

   - **User Experience:**
     - What features would make buying parking passes online easy for students?
     - Are there any steps that should be included or left out in the online process?

   - **Security:**
     - What security measures are needed for online payments?
     - Are there any existing security measures we need to use?

   - **Notifications and Confirmations:**
     - What kind of confirmation should students get after buying a parking pass (e.g., email, SMS, on-screen message)?
     - Should there be reminders when the parking pass is about to expire?

   - **Payment Options:**
     - What payment methods should be available for buying parking passes (e.g., credit card, debit card, online banking)?
     - Are there any payment services the university already uses that we should include?

   - **User Interface:**
     - What information should be shown on the parking pass purchase page (e.g., price, duration, terms, and conditions)?
     - Should students be able to view and print their parking passes immediately after buying them? If yes, in what format (e.g., PDF)?

Scenario 3

1. Explain your understanding of the business analyst's role in each stage of the Software development life cycle using the Website Services Inc. quotation as a reference.

    - **Requirements Analysis**

        - Talking to Stakeholders: Chat with people like Marius Kruger to find out what they need from the e-commerce website.
        - Gathering Information: Collect details about what features the website should have and how it should work.

    - **Design**
        - Clarifying Needs: Help the designers understand what the website should look like based on the requirements.
        - Keeping Track: Ensure that every design element matches the requirements.

    - **Development**
        - Clarifying Requirements: Explain the details to the developers so they know exactly what to build.
        - Managing Changes: If Marius changes his mind about something, manage those changes and update everyone involved.

    - **Testing**
        - Creating Test Cases: Help create tests to check that the website meets all the requirements.
        - User Acceptance Testing: Organise sessions where Marius and his team can test the website and give feedback.
        - Verifying Requirements: Ensure that the website does what it's supposed to do.

    - **Hardware Installation**
        - Verifying Needs: Make sure the hardware being installed meets the requirements.
        - Coordinating Installation: Work with the technical team to make sure installation goes smoothly.

    - **Installation onto Server**
        - Planning Deployment: Help plan how the website will be set up on the server.
        - Checking Installation: Ensure the website is set up correctly and works on the server.

- **Catalogue Data and Image Upload**
  - Defining Requirements: Make sure the data and images uploaded to the site meet the client's needs.
  - Ensuring Quality: Check that all data and images are high quality and correct.

- **Training and Handover**
  - Creating Training Materials: Make guides and manuals to help users understand the new system.
  - Conducting Training: Teach Marius and his team how to use the website.
  - Providing Documentation: Give all necessary documents to Marius for future reference.

- **Post-Implementation Support**
  - Coordinating Support: Help Marius and his team with any issues that come up after the website is live.
  - Gathering Feedback: Collect feedback to find out what can be improved and make necessary changes.

Scenario 3

For the below tables for Customer and Order for Enviro Bank, complete the table for the given attributes.

Entity name:	**CUSTOMER**		
Attribute	**Key (PK / FK)**	**Data type**	**Data size**
Customer ID	PK	Integer	8
Create Date		Date	50
Status		Varchar(20)	20
First Name		Varchar(50)	50
Last Name		Varchar(50)	50
Email		Varchar(100)	100
Cell Phone		Varchar(20)	20
Date of Birth		Date	50
Address Line 1		Varchar(100)	100
Zip Code		Varchar(10)	10
Gender (e.g., Female, Unknown)		Varchar(10)	10

Entity name:	**ORDER**		
Attribute	**Key (PK / FK)**	**Data type**	**Data size**
Order ID	PK	Integer	8
Create Date		Date	20
Status		Varchar(20)	20
Order Date		Date	20
Customer ID	FK	Integer	8
Total Pre-Tax Value		Decimal(10,2)	20
Total Tax Value		Decimal(10,2)	20
Total Order Value		Decimal(10,2)	20
Total Quantity of Products		Integer	8