

Assignment-Problem statement,

business requirement,

ke activitiars to implement,

future aspects,

expectations

Online Food Shopping

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Problem Statement:

With the increasing demand for convenience and safety, online food shopping has become a popular choice for consumers. However, several challenges must be addressed to ensure a seamless and satisfactory experience

Business Requirements:

- 1.product catalog and management.
- 2.order management.
- 3.delivery .
- 4.user account management.
- 5.payment processing.
- 6.Hygiene safety standards.
- 7.cutomer support and feedback

Key Activites to implement:

Product Catalog Management:

Ability to manage a diverse range of food products, including fresh produce, packaged goods, and specialty items.

Support for categorization, filtering, and search functionality to facilitate easy browsing and discovery of products.

Order Management:

Capability to process and manage orders efficiently, including order placement, modification, and cancellation.

Integration with inventory management system to ensure accurate stock levels and prevent overselling.

Delivery :

Integration with third-party logistics providers for efficient and timely delivery of food orders.

Real-time order tracking and notifications for customers to monitor the status of their deliveries.

User Account Management:

Secure registration and authentication process for customers to create and manage their accounts.

Personalized user profiles to store preferences, past orders, and delivery addresses for a streamlined shopping experience.

Payment Processing:

Integration with secure payment gateways to support various payment methods, including credit/debit cards, digital wallets, and online banking.

Compliance with industry standards and regulations for payment security and data protection.

Hygiene and Safety Standards:

Implementation of stringent hygiene and safety protocols for food handling, storage, and delivery.

Regular inspections and audits to ensure compliance with food safety regulations and industry standards.

Customer Support and Feedback:

Provision of multiple channels for customer support, including live chat, email, and phone support.

Mechanism for collecting and analyzing customer feedback to identify areas for improvement and enhance the overall shopping experience.

Future Aspects:

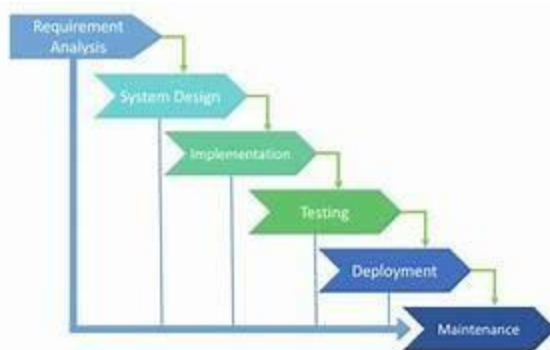
1. Focusing on environmentally sustainable practices, such as eco-friendly packaging and carbon-neutral delivery options, to reduce the environmental impact of online food shopping.
2. Integrating social media platforms and social commerce features into online food shopping, enabling users to discover and purchase products directly from social media content and engage with brands and influencers.

Expectation:

1. **Enhanced Customer Satisfaction:** By offering hyper-personalized experiences, streamlined processes, and transparent supply chains, online food shopping platforms can enhance customer satisfaction and loyalty.
2. **Increased Efficiency and Cost Savings:** Automation and robotics can improve operational efficiency, reduce errors, and lower labor costs, leading to improved profitability for online food shopping businesses.
3. **Environmental Responsibility:** Prioritizing environmental sustainability can attract environmentally conscious consumers and position online food shopping platforms as responsible corporate citizens, contributing to positive brand perception and differentiation.

Assignment 1: SDLC

Software Development Life Cycle (SDLC) Phases



Requirements:

Understanding and documenting client needs and expectations. It sets the foundation for the entire project.

Importance- the project scope and goals, ensuring alignment with client expectations.

Design:

Creating a blueprint for the software solution based on gathered requirements. It defines the architecture, UI/UX, and data structures.

Importance- Guides development, ensuring a structured approach and efficient use of resources.

Implementation:

Translating the design into actual code. This phase involves programming, coding standards, and version control.

Importance- Turns design into functional software, bringing the concept to life.

Testing:

Evaluating the software against predefined requirements to ensure it meets quality standards. It involves various testing methods like unit testing, integration testing, and user acceptance testing.

Importance- Identifies and resolves defects, ensuring reliability and user satisfaction.

Deployment:

Releasing the software for use by end-users. It includes installation, configuration, and ongoing maintenance.

Importance- Delivers the product to users, marking its completion and beginning of maintenance.

Maintenance:

Providing ongoing support, bug fixes, and updates to the software to keep it running smoothly and address any issues that arise.

Importance- maintenance is essential for the long-term success and sustainability of software products, as it allows developers to address issues.

Assignment 2: Develop a case study analyzing the implementation of SDLC phases in an Online Food Shopping System

Planning:

Define the goals and requirements of the online food shopping system. Identify key features, such as user registration, browsing products, adding items to cart, payment processing, etc.

Analysis:

Gather detailed requirements from stakeholders, including both functional and non-functional requirements. Understand the target audience, their needs, and potential challenges.

Design:

Create a design that outlines the architecture of the online food shopping system. This includes database design, user interface design, and system architecture design.

Implementation:

Develop the system based on the design specifications. This involves coding the front-end (user interface) and back-end (server-side logic, database interactions, etc.).

Testing:

Perform various types of testing, including unit testing, integration testing, system testing, and user acceptance testing (UAT). Ensure that the system functions correctly and meets the requirements.

Deployment:

Deploy the online food shopping system to a production environment. This may involve setting up servers, configuring databases, and ensuring scalability and reliability.

Maintenance:

Provide ongoing support and maintenance for the system. This includes fixing bugs, adding new features, and addressing any issues that arise post-launch.

Conclusion:

In conclusion, the implementation of online food shopping using the Software Development Life Cycle (SDLC) is a comprehensive process that requires careful planning, analysis, design, implementation, testing, deployment, and maintenance. Each stage of the SDLC plays a crucial role in ensuring the success of the project and the satisfaction of stakeholders.

By following the SDLC approach, teams can effectively manage the development process, mitigate risks, and deliver a high-quality product that meets user needs and expectations. Additionally, adherence to best practices, coding standards, and security protocols throughout the SDLC helps ensure the reliability, scalability, and security of the online food shopping system.

Assignment 3: Research and compare SDLC models suitable for engineering projects. Present findings on Waterfall, Agile, Spiral, and V-Model approaches, emphasizing their advantages, disadvantages, and applicability in different engineering contexts.

Waterfall Model:

Description: Sequential model with phases like requirements, design, implementation, testing, deployment, and maintenance.

Advantages:

- Simple and easy to understand.
- Well-suited for projects with stable requirements.

Disadvantages:

- Not adaptable to changing requirements.
- Testing occurs late in the process, which can lead to costly fixes.

Applicability: Suitable for engineering projects with well-defined and stable requirements, where the product's scope and specifications are unlikely to change significantly throughout the development process.

Agile Model:

Description: Iterative and incremental approach focusing on collaboration, customer feedback, and delivering small, working increments.

Advantages:

- Highly flexible and adaptable to changing requirements.
- Promotes continuous improvement and customer involvement.

Disadvantages

- May lack documentation compared to other models.
- Can be challenging to estimate time and cost accurately.

Applicability: Ideal for projects with evolving or unclear requirements, such as software development where customer feedback is crucial throughout the development process.

Spiral Model:

Description: Iterative model combining elements of both waterfall and prototyping models, with an emphasis on risk analysis and mitigation.

Advantages:

- Allows for iterative development with a focus on risk reduction.
- Suitable for large and complex projects with high uncertainty.

Disadvantages:

- Can be costly and time-consuming due to its iterative nature.
- Requires experienced personnel to manage risk effectively.

Applicability:

Well-suited for projects where risk management is crucial, such as aerospace engineering or projects involving cutting-edge technologies.

V- Model:

Description: Extension of the waterfall model where each stage of development is associated with a corresponding testing phase.

Advantages:

- Clear and structured approach with well-defined phases.
- Helps ensure that requirements are properly implemented and tested.

Disadvantages:

- Testing activities may be delayed until later stages, leading to potential issues.
- Requires thorough upfront planning and documentation.

Applicability: Suitable for engineering projects where thorough testing and validation are paramount, especially in industries with stringent regulatory requirements or where safety and reliability are critical.