Software Engineering

AIM : To create a RMMM plan: Create risk assessment template for a case study

PERFORMANCE :

1. **Identify Risks**

    a. Refer to the Risk Identification Checklist to be identify the risk

        i. Product Size Risks ii.

        Business Impact Risks iii.

        Customer Related Risks iv.

        Process Risks

        v.Technical Issues vi. Technology

        Risks vii. Development

        Environment Risks viii. Staff Size

        and Experience Risks

2. **Prepare Risk Table by identifying potential risks and categorizing their impacts as follows** Impact Values:

        1 – Catastrophic

        2 – Critical

        3 – Marginal
        4 – Negligible

Risks	Category	Probability	Impact
Complex Integration	Product Size Risks	60%	3
Security Breach	Business Impact Risks	15%	1
System Outage	Business Impact Risks	20%	1
Lack of User-friendliness	Customer Related Risks	45%	2
Inaccurate Information	Customer Related Risks	30%	2
Inefficient Workflow	Process Risks	40%	2
Integration Issues (Third-Party Services)	Technology Risks	45%	2
Outdated Technology	Technology Risks	10%	2
Inadequate Testing	Development Environment Risks	35%	2
Lack of Expertise (Security)	Development Environment Risks	25%	2

After sorting the above risk table based on impact and probability of risks.

Risks	Category	Probability	Impact
Lack of Version Control	Development Environment Risks	60%	3
Complex Integration	Product Size Risks	60%	3
Low User Adoption	Business Impact Risks	52%	2
Lack of Technical Expertise	Technology Risks	42%	2
Integration Issues (Third-Party Services)	Technology Risks	45%	2
Inefficient Workflow	Process Risks	40%	2
Lack of User-friendliness	Customer Related Risks	45%	2
Inaccurate Information	Customer Related Risks	30%	2
Unclear Development Process	Process Risks	35%	1
Security Breach	Business Impact Risks	15%	1
System Outage	Business Impact Risks	20%	1
Outdated Technology	Technology Risks	10%	2
Inadequate Testing	Development Environment Risks	35%	2

Lack of Expertise (Security)	Development Environment Risks	25%	2

So the cutoff line for risk table is defined after considering the risks from above tables and their probabilities and by accounting budget, time factor etc.is 40% cutoff line = 40%.

3. **Create a Risk Mitigation, Monitoring and Management plan for the Risks identified in the Risk Table**

<table>
<tr><td colspan="4" align="center"><h3>Risk Information Sheet</h3></td></tr>
<tr><td>RISK ID :- P02-01</td><td>DATE : 08/04/2024</td><td>PROB : 40%</td><td>IMPACT :- High</td></tr>
<tr><td colspan="4">

Description :-
Limited integration between various functionalities of the smart restaurant system (e.g., table booking, order placement, payment processing) may result in delays, errors, and inconsistencies in the customer experience. This could lead to decreased customer satisfaction and adoption of the system.

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Refinement/Context :-
For a smart restaurant management system, integration is crucial for seamless operations. Here's how flawed integration can manifest:
- Data Discrepancies: Incompatible integrations may lead to inconsistencies in data across various functionalities such as inventory management, table bookings, and billing. This can result in errors in orders, stock shortages, or overstocking.
- Navigation Challenges: If the integrations aren't smooth, restaurant staff may encounter difficulties navigating between different features of the management system. This could slow down processes, leading to longer wait times for customers or confusion among staff members.
- Service Disruptions: Integration problems might cause service outages or delays in critical functions like order processing, payment handling, or kitchen operations. This can disrupt the dining experience for customers and impact the overall efficiency of the restaurant.

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Mitigation/Monitoring :-

Mitigation:

- Use of Standardized APIs: Implement standardized Application Programming Interfaces (APIs) to facilitate seamless communication between different components of the system. By adhering to industry standards, compatibility issues can be minimized, and integration efforts streamlined.
- Testing and Quality Assurance: Conduct thorough testing and quality assurance procedures to validate the integration of various functionalities. This includes

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functional testing, integration testing, and user acceptance testing to identify and rectify any issues or inconsistencies before deployment.
- Continuous Monitoring and Feedback: Establish mechanisms for continuous monitoring of system performance and customer feedback. This includes real-time monitoring of transaction flows, error logs, and customer reviews to promptly identify any integration-related issues and address them proactively.

Monitoring:

- Performance Metrics Tracking: Monitor key performance indicators (KPIs) related to system integration, such as transaction processing time, order accuracy, and payment processing speed. Any deviations from established benchmarks should be investigated promptly.
- Error Logging and Reporting: Implement robust error logging mechanisms to capture integration-related errors and inconsistencies. Monitor error logs regularly to identify recurring issues and prioritize them for resolution.
- Stakeholder Communication: Maintain open communication channels with stakeholders, including customers, staff, and management, to stay informed about any integration challenges or concerns they may encounter. Regular updates and status reports should be provided to keep stakeholders informed about the progress of integration efforts and any remedial actions taken.

Management:-
Regularly evaluating food sources:
Assessing quality, freshness, and adherence to safety standards.
Ensuring food sources meet customer expectations and regulatory requirements.
Maintaining open communication with customers:
Gathering feedback and addressing concerns related to food sources.
Understanding customer preferences and identifying areas for improvement.
Developing contingency plans for food source disruptions:
Mitigating the impact on customers by having backup options.
Ensuring alternative sources are available to maintain trust.
Proactively seeking new food sources:
Monitoring the market for emerging suppliers and diverse products.
Aligning with evolving customer tastes and preferences.
Regularly updating the menu strategy:
Analyzing customer feedback and market trends.
Keeping the menu fresh, relevant, and catering to changing customer preferences and dietary trends.

Stakeholder Interests:
Balancing customer demands for diverse and high-quality food.
Maintaining compliant partnerships to ensure the availability of safe and fresh ingredients.
Adaptability:
Evolving the menu to reflect customer preferences, market changes, and culinary trends.

Current Status :-
08/04/2024 - Mitigation steps initiated

Conclusion:

Hence, Risks were identified and a risk table was created and a risk information sheet was made for the same.