Software Engineering

**ASSIGNMENT 04**

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BS-CS-V-C

### Software Porject -> ***DoorDash (***Food Delivery App***)***

### **Qno 1**

***a.***

### 

#### **Risk Identification**

For the food ordering app project, here are five potential risks:

1. **Technical Risks**

Problems integrating third-party services (e.g., payment gateways, mapping services). The system may fail to handle high traffic during peak hours.

1. **Project Management Risks**
   * Uncontrolled changes or continuous growth in project scope.
   * Failure to meet project milestones or deadlines.
2. **External Factors**

New laws or regulations regarding food delivery services.

1. **Human Resources**

Lack of necessary technical skills among team members.

#### 

***b.***

#### **Risk Indicators and Mitigation**

1. **Integration Issues**

**Indicators:** Frequent API failures, long response times from third-party services.

**Mitigation Plan:**

* Conduct thorough testing of third-party services before integration.
* Have alternative services/providers ready in case of persistent issues.

1. **Scalability Problems**

**Indicators:** Slow system performance, frequent crashes during high traffic.

**Mitigation Plan:**

* Implement load testing and performance optimization from the early stages.
* Use cloud services to scale resources dynamically.

1. **Alteration to scope of project**

**Indicators:** Continuous addition of new features, changes in project requirements.

**Mitigation Plan:**

* Establish a clear project scope and change management process.
* Allocate buffer time and resources for potential changes.

1. **Timeline Delays**

**Indicators:** Missed milestones, project phase delays.

**Mitigation Plan:**

* Use project management tools to track progress and ensure adherence to schedules.
* Reallocate resources and adjust timelines as necessary.

1. **Regulatory Changes**

**Indicators:** Announcements of new regulations, industry trends.

**Mitigation Plan:**

* Stay updated with industry regulations and maintain compliance.
* Adjust business processes and update the system to comply with new regulations.

1. **Skill Gaps**

**Indicators:** Low productivity, high error rates.

**Mitigation Plan:**

* Provide training and upskilling opportunities for team members.
* Hire skilled consultants or outsource certain tasks.

***Qno 2***

***a.***

#### 

**W**hite **B**ox **T**esting, also known as Clear Box Testing, Glass Box Testing, or Structural Testing, involves testing internal structures or workings of an application. It requires knowledge of the internal code and is performed at various levels of software development, including unit testing, integration testing, and system testing.

**Importance:**

* **Improves Code Quality:** Identifies hidden errors and helps in optimizing the code.
* **Security:** Finds vulnerabilities in the code, ensuring better security.
* **Efficiency:** Enhances performance by ensuring code works as intended.

***b.***

**Test Case ID:** C-1

**Description:** Verify the login functionality.

| Test Step | Input | Expected Output | Actual Output | Results |
| --- | --- | --- | --- | --- |
| 1 | Valid username and password | User should be logged in successfully | User logged in successfully | PAss |
| 2 | Invalid username and password | Error message should be displayed | Error message displayed | Pass |

**Test Case ID:** C-2

**Description:** Ensure users can browse restaurants.

| Test Step | Input | Expected Output | Actual Output | Results |
| --- | --- | --- | --- | --- |
| 1 | Navigate to the restaurant browsing section | List of restaurants should be displayed | List of restaurants displayed | Pass |
| 2 | Apply a filter | List of restaurants should be filtered accordingly | List of restaurants filtered accordingly | Pass |

**Test Case ID:** C-3

**Description:** Check if menus are displayed correctly.

| Test Step | Input | Expected Output | Actual Output | Results |
| --- | --- | --- | --- | --- |
| 1 | Select a restaurant | Restaurant menu should be displayed | Restaurant menu displayed | Pass |
| 2 | Select a menu category | Items in the category should be displayed | Items in the category displayed | Pass |

**Test Case ID:** TC-4

**Description:** Validate the order placement process.

| Test Step | Input | Expected Output | Actual Output | Results |
| --- | --- | --- | --- | --- |
| 1 | Add items to the cart | Items should be added to the cart | Items added to the cart | Pass |
| 2 | Proceed to checkout and place order | Order should be placed successfully and confirmation message displayed | Order placed successfully and confirmation message displayed | Pass |

**Test Case ID:** TC-5

**Description:** Ensure restaurants can manage orders

| Test Step | Input | Expected Output | Actual Output | Results |
| --- | --- | --- | --- | --- |
| 1 | Receive a new order notification | Order details should be displayed | Order details displayed | PAss |
| 2 | Accept or decline the order | Order status should be updated accordingly | Order status updated accordingly | Pass |

***Qno 3***

| **Requirement ID** | **Requirement Description** | **Test Case ID** | **Test Case Description** |
| --- | --- | --- | --- |
| FR-1 | User Authentication | TC-1 | Verify login functionality |
| FR-2 | Browse Restaurants | TC-2 | Ensure users can browse restaurants |
| FR-3 | View Menus | TC-3 | Check if menus are displayed correctly |
| FR-4 | Place Order | TC-4 | Validate the order placement process |
| FR-5 | Manage Orders (Restaurant) | TC-5 | Ensure restaurants can manage orders |