Technical Challenge: Agile Product Ownership & Scrum Mastery

1. Backlog Prioritization using MoSCoW (10 Marks)

Must-have:

1. **Customer Support Team's Request – Reports that users are frustrated with order tracking delays due to API issues with logistics providers. They request an immediate fix.**
   - Reason: Users are experiencing delays in order tracking, directly impacting user experience and satisfaction. Fixing this issue is critical and urgent.

2. **Engineering Team's Concern – Reports that the current microservices architecture is experiencing high latency issues, slowing down order tracking responses. They suggest refactoring part of the system.**
   - Reason: High latency is causing slow order tracking responses. This is essential to maintain platform performance and refactoring this part of the system is very important for user experience and satisfaction.

Should-have:

1. **Sales Team's Request – Needs a new feature that allows customers to generate customized reports on demand trends for their internal analytics.**
   - Reason: very useful for internal analytics and customer insights and adds value to the system, but it's secondary to fixing existing critical and urgent issues.

Could-have:

1. **CEO's Request – Wants an AI-powered chatbot integrated into the platform to help suppliers track orders via WhatsApp.**

   - Reason: This feature can enhance user experience and brand value, but not as critical as important features and urgent issues fix.

Won't-have:

- All identified requests have some level of importance and adding value.

2. Sprint Planning (10 Marks)

❖ **Story Point Estimation:**

1. **Fix API Issues with Logistics Providers (Customer Support Request)** - **8 Points**
   - Reason: Medium complexity as it involves diagnosing integration issues and potentially coordinating with external partners.
2. **Refactor Microservices to Reduce Latency (Engineering Team's Concern)** - **13 Points**
   - Reason: High complexity as it requires refactoring core components and performance optimization.
3. **AI-Powered Chatbot for Order Tracking via WhatsApp (CEO's Request)** - **8 Points**
   - Reason: Medium complexity due to integrating AI with WhatsApp API and platform backend.
4. **Customizable Demand Trend Reports (Sales Team's Request)** - **5 Points**
   - Reason: Medium complexity since it mostly involves data aggregation and presentation.

❖ **Sprint Backlog for Sprint 1 (30 Story Points Capacity)**

Fix API Issues with Logistics Providers	8 Points
Refactor Microservices	13 Points
Customizable Demand Trend Reports	5 Points
Total Points	26

Remaining Capacity: **4 Points** (reserved for bug fixes or unexpected obstacles may face the team)

Next Sprint (Backlog for Sprint 2)

1. **AI-Powered Chatbot for Order Tracking via WhatsApp** - **8 Points**
   - Important for enhancing customer experience but prioritized after critical fixes and implementing urgent requests that improve the system efficiency.

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1. Fix API Issues with Logistics Providers (8 Points)

User Story:
As a **provider user**, I want accurate and timely order tracking information, so that I can stay updated on the status of my orders without delays**.**

Acceptance Criteria:

- The system retrieves order tracking data from logistics providers in short time.
- Error handling for API failures.
- Show a message when the service is temporarily unavailable.

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2. Refactor Microservices Architecture to Reduce Latency (13 Points)

User Story:
Refactoring the microservices architecture to be optimized for low latency**,** so that order tracking responses are fast and consistent**.**

Acceptance Criteria:

- Latency for order tracking is reduced.
- Code is refactored to improve efficiency and performance.

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3. Customizable Demand Trend Reports (5 Points)

User Story:
As a **customer user**, I want to generate customizable reports on demand trends**,** so that I can analyze patterns and make informed business decisions.

Acceptance Criteria:

- Users can select date ranges, product categories, and regions.
- Reports are generated and presented in a user-friendly format.
- Export options are available (PDF, Excel).

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4. AI-Powered Chatbot for Order Tracking via WhatsApp (8 Points)

User Story:
As a **supplier**, I want to track my orders using WhatsApp via a chatbot, so that I can quickly check order status without logging into the platform**.**

Acceptance Criteria:

- Chatbot responds with accurate order status.
- Bot handles common questions and gracefully responds to unsupported queries.

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2. Handling Stakeholder Conflicts (10 Marks)

A. _The CEO is unhappy that the AI chatbot is not in Sprint 1._

1. Schedule a meeting with each of CEO, Engineering Lead, Product Owner, and Scrum Master to discuss the situation.
2. Discuss the priority of the CEO request relative to the urgent fixes avoiding the system issues.
3. Acknowledge the importance of delivering the chatbot to enhance user engagement, but inform them that a crashing system will decrease its value.
4. If the chatbot task is critical for a specific event or deadline, we can agree to adjust the sprint 1 backlog to add this feature to sprint 1 and exchange it with the least important feature to sprint 2.
5. Regularly update stakeholders on progress and challenges.

B. _The Engineering team warns that the system may crash if refactoring is delayed._
1. Schedule a meeting with each of CEO, Engineering Lead, Product Owner, and Scrum Master to discuss the situation.
2. Discuss the priority of the request, break it into small tasks and estimate each of them to decide how to work on it without too much delay in the sprint.
3. Check team resources and discuss the ability to re-assign backlog to developers in order to work on both sprint goal and code refactoring in parallel.
4. Adjust the sprint 1 backlog to add refactoring micro services task.
5. Regularly update stakeholders on progress and challenges and convince them with the importance of the sprint delay to avoid system crashing.

4. Scrum Master Challenge – Addressing a Sprint Blocker (10 Marks)

1. Encourage the team to share what was discovered, why the issue is more complex, and how it impacts the sprint goal.
2. Acknowledge the challenge without assigning blame and focus on solutions.
3. Work with the Product Owner and Development Team to understand any potential workarounds or alternative solutions.
4. Collaborate with the Product Owner and technical leader to re-order the priorities and update the Sprint Backlog according to the new plan.
5. Hold a quick Stakeholder Update Meeting to identify the problem and the steps being taken to solve it and minimize impact and how long the fix will take.
6. Monitor the team, remove obstacles and provide encouragement to keep motivation high.
7. Provide daily updates to stakeholders and track the progress of the fix with the development team during Daily Standups.
8. In the Retrospective meeting after the sprint, discuss why this issue complexity was underestimated and how to avoid similar situations in the next sprints.