## Activity: Other Agile Frameworks and Approaches

### Scenario:

You are part of a team of Agile practitioners embarking on developing a feature for an e-commerce platform that will enable users to search and filter an array of products easily. This feature is critical for users to find and explore products, enhancing their shopping experience and increasing the likelihood of purchases.

Below is an outline of the project details:

**Project objective:** Create a robust Product Search and Filter feature that allows users to:

● **Search:** Enter keywords to find products by name, description, or other attributes.

● **Filter:** Narrow down search results based on categories such as outdoor clothing, sportswear, price, customer ratings, and in-stock.

● **Sort:** Organize results by criteria like relevance, price, popularity, or ratings.

**Project team size:** The team, which includes the project manager, product owner, developers, designers, and testers, has ten members.

Your team must ensure the feature is user-friendly, efficient, and capable of handling large product databases without compromising speed. Users are expected to frequently use this functionality to navigate the platform, making it essential for a seamless shopping experience. To achieve this, you’ll need to apply XP, Crystal, and DSDM practices to ensure quality, frequent delivery, and alignment with business goals.

### Step 1: Apply the XP principle of Test at all levels

Identify and outline a testing strategy that includes unit, integration, and acceptance testing to ensure quality across all levels for the Product Search and Filter feature.

Below is a brief definition of each testing type to guide your thinking:

● **Unit testing:** Verifies individual components or functions of code/features in isolation to ensure they work as expected.

● **Integration testing:** Checks how different parts of a feature work together, ensuring they interact correctly.

● **Acceptance testing:** Validates the entire system against user requirements to confirm it meets business needs and is ready for release.

| **Testing type** | **Testing strategy** |
| --- | --- |
| **Unit testing** | Focus on testing individual components of the feature, such as search algorithms, filter conditions, and sorting logic. These tests ensure that each piece functions correctly in isolation. |
| **Integration testing** | Verify how the search and filter feature interacts with other system parts, such as product database, user interface, and backend services. This testing phase helps confirm smooth and correct integration. |
| **Acceptance testing** | Perform tests based on user scenarios to ensure that the search and filter feature meet user expectations. Acceptance tests might include cases like finding products by name, filtering by categories, and sorting results by user ratings or price. |

### Step 2: Develop a strategy for frequent delivery as a Crystal practice

To complete this step, you’ll need to apply Crystal’s practice of Frequent Delivery in the two subsequent tasks:

**2a:** Consider the project objective and the requirements of the Product Search and Filter feature given in the scenario. Use this information to develop a release plan for delivering the Product Search and Filter feature increments.

Increments will include basic search, basic filtering, advanced filtering and sorting, optimization, and usability enhancements.

| **Increment** | **Description** |
| --- | --- |
| Increment 1: Basic search | Release a simple keyword search that allows users to find products by entering a name. This increment provides early value by giving users fundamental search functionality. |
| Increment 2: Basic filtering | Add a filter by category. This feature allows users to narrow down search results, making the search more usable. |
| Increment 3: Advanced filtering and sorting | Incorporate advanced filters for example price range, rating, etc. and sorting options for instance price and popularity. |
| Increment 4: Optimization and usability enhancements | Based on user feedback, refine search accuracy and predictive text, and optimize loading speed. |

**2b:** Determine the most suitable Crystal variant for this project based on team size, criticality, and communication needs.

| **Crystal variant (Color)** | **Reason for selection** |
| --- | --- |
| Crystal Yellow | The Crystal Yellow variant is ideal for this team size (10 members). It allows for effective communication and collaboration while accommodating medium-complexity projects that require frequent adjustments based on user feedback. |

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### Step 3: Focus on business needs as a DSDM practice

Use the information from the scenario to outline how the Product Search and Filter feature directly supports the e-commerce platform's business objectives.

| The product search and filter feature supports business objectives by:   * **Enhancing user experience:** Users can quickly locate products, improving satisfaction and retention. * **Increasing conversion rate:** An efficient search and filter experience encourages more purchases. * **Improving brand loyalty:** A seamless shopping experience builds trust and repeat business. * **Supporting business agility:** Rapid feedback on feature performance allows for continuous improvement, ensuring the feature remains aligned with user needs. |
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