PMP Bootcamp: Uncovering & Understanding Requirements – The Foundation of Scope

Student Name: _____ Date: _____

Instructions: Before you can define what your project will do (scope), you need to understand what your stakeholders need and expect. This is where requirements come in! This worksheet will explore how to elicit (draw out), analyze, and document requirements effectively.

Core Concept Reminder (from PMBOK 7 & Rita):

- **PMBOK 7th Edition:** While PMBOK 7 doesn't have a "Collect Requirements" process per se, the "Stakeholder" and "Planning" performance domains are highly relevant. Understanding stakeholder needs to deliver **value** is paramount. Elicitation and analysis are key activities in understanding needs.
- **Rita Mulcahy's PMP Exam Prep (11th Ed.):** Stresses that requirements form the basis for the WBS and project scope. Incomplete or poorly defined requirements are a major cause of project problems. The PM must ensure requirements are clear, testable, and agreed upon.

Part 1: What Are Requirements & Why Do We Care?

1. **Requirement (Definition):** A condition or capability that must be met or possessed by a system, product, service, result, or component to satisfy an agreement or other formally imposed specification.
    - **In simpler terms:** What does the product need to *do* or *be like* to be successful and meet stakeholder needs?
2. **Why is Eliciting and Analyzing Requirements so crucial for project success?** (List two reasons)
   a. _____
   b. _____
3. **Categories of Requirements (Examples):**
    - **Business Requirements:** High-level needs of the organization (e.g., "Increase market share by 10%").
    - **Stakeholder Requirements:** Needs of a stakeholder or stakeholder group (e.g., "The marketing team needs to be able to update website content easily").
    - **Solution Requirements:** Features, functions, and characteristics of the product, service, or result. These are often broken down further:
        - **Functional Requirements:** What the product *does* (e.g., "The system shall allow users to reset their passwords").

        - **Non-Functional Requirements (NFRs) / Quality Attributes:** How well the product does it (e.g., "The password reset page must load in under 3 seconds," "The system must be available 99.9% of the time," "The system must be secure").
    - **Transition & Readiness Requirements:** Temporary capabilities needed to move from the current state to the future state (e.g., "Data migration from old system to new system," "User training").
    - **Project Requirements:** Actions, processes, or other conditions the project must meet (e.g., "The project must adhere to ISO 9001 standards").
    - **Quality Requirements:** Conditions or criteria needed to validate the successful completion of a project deliverable or fulfillment of other project requirements.
    - **Activity:** A user says, "The new accounting software *must be easy to learn* for our current staff." Which category (or sub-category) of requirement is this primarily?

Part 2: How Do We Get Requirements? – Eliciting & Analyzing

Eliciting Requirements: The process of drawing out, exploring, and identifying information from stakeholders and other sources.

Analyzing Requirements: The process of examining, categorizing, prioritizing, modeling, and validating the elicited information to ensure it is clear, complete, consistent, and testable.

1. **Methods for Eliciting and Analyzing Requirements (Tools & Techniques):**
   Briefly describe how each method helps in eliciting OR analyzing requirements:

Method	Helps With... (Elicit, Analyze, or Both)	Brief Description & Contribution
Interviews	Elicit	Directly asking stakeholders questions to gather information about their needs and expectations.
Focus Groups	Elicit	Bringing together prequalified stakeholders and subject matter

		experts to learn about their expectations and attitudes.
Facilitated Workshops (e.g., JAD - Joint Application Design, QFD - Quality Function Deployment)	Elicit & Analyze	Bringing key cross-functional stakeholders together to define product requirements in a concentrated, collaborative session.
Brainstorming / Idea Generation	Elicit	Generating a broad range of ideas from a group, often used early in elicitation.
Surveys / Questionnaires	Elicit	Gathering information from a large number of respondents quickly and efficiently.
Observation / Job Shadowing	Elicit	Watching users perform their jobs or tasks to understand their processes, needs, and pain points.
Prototyping / Storyboarding	Elicit & Analyze	Creating an early model or visual representation of the product to get feedback and refine requirements.
Document Analysis	Analyze (can also Elicit)	Reviewing existing documentation (e.g., business plans, process flows, existing system specs) to identify relevant information.
Benchmarking	Analyze (can also Elicit)	Comparing actual or planned practices or the project's quality standards to those of comparable projects.
Affinity Diagrams	Analyze	A technique that allows large numbers of ideas to be classified into groups for review and analysis.

Mind Mapping	Elicit & Analyze	A visual tool to capture and organize ideas and information around a central topic.

2. **Graphic Requirements Elicitation & Analysis Methods (Visualizing Needs):**
   Visuals are powerful! Many of the above methods can produce graphical outputs.
    - **Context Diagrams / System Context Level 0 DFD:** A high-level visual representation of the system/product showing its boundaries, and how it interacts with external entities (users, other systems).
        - *Why useful?* _____
    - **Use Cases / User Stories (Agile):**
        - *Use Case:* Describes how a user interacts with a system to achieve a specific goal. (More detailed, often with diagrams).
        - *User Story:* A short, simple description of a feature told from the perspective of the person who desires the new capability, usually a user or customer. (Format: "As a [type of user], I want [an action] so that [a benefit/value].")
        - *Why are these effective for capturing functional requirements?*

    - **Prototypes / Wireframes / Mockups:** (As mentioned above, excellent for visual feedback).

3. **Balancing Requirements:**
   Stakeholders often have conflicting requirements or requirements that might be too costly or complex to implement.
    - **What is the PM's role (often with a Business Analyst or Product Owner) when dealing with conflicting or unrealistic stakeholder requirements?**

Part 3: What Do We Get? – Artifacts of Requirements Activities

After eliciting and analyzing, we need to document what we've found.

1. **Requirements Documentation:**
    - **Purpose:** Describes how individual requirements meet the business need for the project. It should be unambiguous (measurable and testable), traceable, complete, consistent, and acceptable to key stakeholders.
    - **What kind of information might you find in detailed Requirements Documentation for a functional requirement? (List 3 things)**
      i. _____
      ii. _____
      iii. _____
      (Examples: Requirement ID, description, acceptance criteria, priority, source, status, assumptions)
2. **Requirements Traceability Matrix (RTM):**
    - **Purpose:** A grid that links product requirements from their origin (e.g., business need, stakeholder) to the deliverables that satisfy them. It helps ensure each requirement adds business value by linking it to business and project objectives.
    - **How does an RTM help manage scope and changes?**

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3. **Product Backlog (Agile Context):**
    - While not "documentation" in the traditional sense for all items, the Product Backlog serves as the primary artifact for requirements in Agile. User stories within it are progressively elaborated.

Part 4: Scenario & Application

Scenario: You are managing a project to create a new mobile app for a local library. The app should allow users to search the library catalog, reserve books, and check their account status.

1. Which **elicitation method(s)** would you use to gather requirements from *potential library patrons (users)*? Why?

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2. Which **elicitation method(s)** would you use to gather requirements from *library staff* (who manage the catalog and reservations)? Why?

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3. A librarian requests that the app also allow users to pay overdue fines. This was not initially considered. How would you approach **analyzing and balancing** this new requirement against existing priorities and constraints?

Key Takeaway: Requirements are the detailed expression of stakeholder needs. Investing time in thoroughly eliciting, analyzing, and documenting them (in whatever format is appropriate for your project approach) is critical for defining the correct scope and ultimately delivering a successful project.