Think of our "Campus Lost & Found System" project with its market research and data gathering as the perfect real-world example of how to put that lecture on requirements into action. It's like the practical guide for everything we just discussed!

**How the Lecture's Ideas Fit our Lost & Found Project**

**1. Getting Started: The Basics of Requirements (Section 1)**

Remember how the lecture talked about setting up a "systematic process"? our Lost & Found project is doing just that! You started by clearly seeing a problem, things getting lost on campus and no easy way to find them. Our goal is to build a smart, digital solution for that. It’s all about making sure what we build actually helps people.

And those "key players" we talked about? We’ve already identified them! Our project clearly sees students like Aisha, campus staff like Mark (the cleaning supervisor), security, and even help desk folks as the main users. Their frustrations are what we're trying to fix. For instance, knowing that 68% of students have lost something and over half used social media to find it (as our data shows!) is exactly what we mean by "eliciting needs" from real users. The next steps for our project would be to formally write all these needs down, double-check them with everyone, and then keep track of them as we build.

**2. Digging for Information: Market Research & Data (Section 2)**

This part of the lecture is essentially a playbook for our "Data Gathering Summary" document.

Instead of just guessing what people want, our project did its homework. That's why we found that the current lost and found system is a "fragmented mess" we got that insight from real data, not assumptions.

We used all the right "data collection techniques":

* **Talking to people (Primary Research):** we would run surveys for students and staff, chat with security and admin, and also watch how people currently try to find lost items.
* **Checking out what's already out there (Secondary Research):** We would look at university journals, campus safety magazines, government tech strategies, and even popular tech blogs and social media groups to see how others handle lost items.

The Anticipated result? We’d be getting a super clear picture of what users need. Those "pain points" will be discovered like items taking forever to find, or not having a reliable way to talk to someone who found your stuff are literally the ideas for the new features (our "functional requirements"). And those "rules" we found, like needing to follow Kenya's data protection laws, become our "non-functional requirements" basically, how securely and reliably our system has to work.

**3. Laying It Out: The Requirements Document Structure (Section 3)**

Our "Market Research Report" and "Data Gathering Summary" will lay a fantastic foundation for building a proper "Software Requirements Document" (SRD) for our Lost & Found System. It's like we would have already started filling in the blanks for the official document:

* **The Intro:** Our "Executive Summary" and "Problem Definition" are spot on they tell everyone what our project is, why it exists, and what problem it's solving.
* **Who's Involved:** Our "Target Users" section clearly points out all our key stakeholders.
* **Our Research:** Our "Data Gathering Summary" *is* the summary of all our data collection.
* **System Overview:** We would give a high-level idea of our "mobile and web application."
* **What It Does (Functional Requirements):** While not formally listed yet, those "Desired Outcomes" (like "real-time updates" or "easy search") and our "Our Advantage" features (like "filters and messaging") are exactly what will become our specific functional requirements.
* **How Well It Does It (Non-Functional Requirements):** The "Regulatory & Compliance Factors" mentioned, like data privacy and secure logins, directly tell us what our non-functional requirements for security and compliance will be. Even saying it's "scalable" is a non-functional need!
* **Assumptions and Rules:** Those compliance factors also hint at the constraints we'll be working under.
* **How We Know It's Done:** We'll need to define clear "acceptance criteria" for each feature, based on those "desired outcomes."
* **The Tracking Map (Traceability Matrix):** This is the crucial next step actually linking everything we'll be discovering to our GitHub project.

**4. What Your System *Will* Do: Functional Requirements (Section 4)**

Based on our project documents, here’s how we’d write out some of those functional requirements for our Campus Lost & Found System:

* **FR-01: A student should be able to report a lost item.**
  + **Why?** Because right now, there's no central, easy way for them to do it.
  + **How we'll know it works:** A student can successfully fill out a form with their item's type, description, where they last saw it, and their contact info.
* **FR-02: Anyone using the system can search for lost items using keywords and filters.**
  + **Why?** To make finding things quick and easy, unlike the current slow, unsearchable manual methods.
  + **How we'll know it works:** Someone can type "keys" or "wallet" and also narrow down their search by "item type," "date lost," or even "campus building."
* **FR-03: The system needs secure direct messaging between the person who found an item and its owner.**
  + **Why?** To solve the problem of unreliable communication and make sure items get returned smoothly.
  + **How we'll know it works:** The finder and owner can chat securely without sharing their personal phone numbers or emails until they're both ready.

**5. How Well Your System *Will* Do It: Non-Functional Requirements (Section 5)**

Your Lost & Found project has some very important "how well" requirements:

* **NFR-01 (Security):** The system absolutely must have rock-solid secure logins for everyone – students and staff.
  + **Why?** To keep everyone's data safe and prevent any sneaky unauthorized access, especially since your market research pointed this out.
* **NFR-02 (Data Privacy):** All personal info and item details within the system must follow local laws like the Kenya Data Protection Act, and global standards like GDPR if you expand.
  + **Why?** It's not just a good idea; it's a legal and ethical must-have.
* **NFR-03 (Usability):** The app (mobile and web) needs to be super easy to use, letting people do main tasks like reporting, searching, or messaging in just a few clicks.
  + **Why?** If it's clunky, people won't use it. Ease of use was a "desired outcome" from your research!
* **NFR-04 (Scalability):** The system should be able to handle, say, 5,000 people using it at once, and process 100 new lost/found reports every hour without slowing down.
  + **Why?** Our research clearly shows a huge potential market on campus and beyond, so it needs to handle a lot of activity without breaking a sweat!

**6. Getting It Done: Using GitHub Project Boards (Section 6)**

Once we've formally written down all those requirements, the next big step for our Campus Lost & Found System is to bring them to life on GitHub!

* **Turn Requirements into Tasks:** Every single functional or non-functional requirement you've defined (like FR-01, NFR-01, etc.) will become its own separate "issue" on GitHub.
  + **Example:** We’d create an issue titled: FR-01: Implement Student Lost Item Reporting.
  + Inside that issue, you'd paste the full description, why it's needed, and how you'll know it's done.
* **Add to the Board:** These issues then become "cards" on our GitHub Project Board, usually starting in the "To Do" column.
* **Organize into Phases:** We would group related tasks for our first version (like core reporting and searching) under a "Milestone" called "MVP Release." Later features, like staff tools or analytics, can go into future milestones.
* **Tagging for Clarity:** Use labels like functional, frontend, backend, security, UI/UX, or MVP to easily sort and prioritize tasks for your Lost & Found app.

**7. Keeping Track: The Functional Requirements Traceability Matrix (Section 7)**

Creating a "traceability matrix" will be incredibly helpful for managing our Campus Lost & Found project.

* **Its Purpose:** This is our project's control panel. It will help us see that every feature we build for the Lost & Found system directly relates to a requirement and has been thoroughly tested.
* **Why it's Great for Your Project:**
  + **Nothing Gets Missed:** It's your ultimate checklist to make sure every feature from your market research actually gets built.
  + **Helps Project Managers:** You'll easily see the progress of every single feature, like student reporting or secure messaging.
  + **Aids Testers:** It gives testers clear links, so they know exactly what to test to confirm "real-time updates" or "secure contact" are working.
  + **Good for Reviews:** It provides a clear history for future check-ins or proving you've met data privacy rules.

Basically, your Campus Lost & Found System project is a fantastic real-world example of how to take a problem, research it, define what's needed, and then manage the building process in a smart, organized way, just like the lecture taught. You're already well on your way!