Lab 3: Key Requirement Documents

Lab Title:

Document Creation – Business Requirement Document (BRD), Software Requirements Specification (SRS), and Functional Requirements Document (FRD)

Objective:

The objective of this lab is to guide students through the creation of three key requirement documents: Business Requirements Document (BRD), Software Requirements Specification (SRS), and Functional Requirements Document (FRD). By the end of this lab, students should be able to:

1. Understand the purpose and key differences between BRD, SRS, and FRD.
2. Develop each document with the proper structure and content.
3. Communicate clearly with different stakeholders using these documents.

Lab Materials:

1. Computer with word processing software (e.g., Microsoft Word or Google Docs).
2. Sample project case study/scenario provided by the instructor.
3. Internet access (optional, for research).
4. Lab handouts with templates for BRD, SRS, and FRD (provided by instructor).

Background and Theory:

Requirement documentation is a critical part of software development. The documentation specifies the business goals, system requirements, and functional specifications that guide the development team, stakeholders, and quality assurance teams.

- **BRD (Business Requirements Document)** outlines high-level business goals and stakeholder needs. It is intended for business users and helps in understanding the project's business objectives.
- **SRS (Software Requirements Specification)** describes the detailed software system to be developed. It includes both functional and non-functional requirements and provides technical information needed by developers.
- **FRD (Functional Requirements Document)** is a more detailed version of the SRS focusing on functional specifications. It breaks down system features and functions, offering a more granular view of how the system should operate.

Lab Procedure:

Part 1: Introduction to Documents

1. **Understanding the BRD, SRS, and FRD**:
    - **Instructor Presentation**: Review the purpose of each document, discussing how they differ in terms of audience, level of detail, and content.
    - **Group Discussion**: Identify key stakeholders for each document type and discuss their role in the development process.

Part 2: Analyzing the Project Case Study

1. **Project Scenario**:

   Students will be provided with a project case study, such as "Developing an E-commerce Website for Online Grocery Shopping."

2. **Reading the Case Study**:
   - Spend 10–15 minutes reviewing the scenario, identifying:
   - Business goals (for the BRD)
   - High-level system requirements (for the SRS)
   - Functional requirements (for the FRD)

Part 3: Creating the BRD (Business Requirements Document)

1. **BRD Structure**: Use the following format:
   - **Introduction**: Project background, business objectives, and scope.
   - **Business Goals**: What does the business want to achieve?
   - **Stakeholder Identification**: Who are the key stakeholders?
   - **Business Requirements**: High-level requirements that align with business objectives (e.g., user experience, regulatory compliance).
   - **Assumptions and Constraints**: Any known limitations, external factors, or assumptions.
2. **Creating the Document**:
   - Based on the project scenario, create the BRD using the structure provided.
3. **Review**:
   Cross-check the BRD to ensure it accurately reflects business needs, stakeholders, and high-level objectives.

Part 4: Creating the SRS (Software Requirements Specification)

1. **SRS Structure**: Use the following format:
   - **Introduction**: Purpose of the document, scope, and definitions.
   - **System Overview**: A brief description of the system's functionality.
   - **Functional Requirements**: Detailed breakdown of system functionality.
   - **Non-Functional Requirements**: Performance, security, scalability, and other technical needs.
   - **System Interactions**: Describe any system interfaces and dependencies.
   - **Assumptions and Dependencies**: List any assumptions and external factors affecting the project.
2. **Creating the Document**:
   - Using the project scenario, draft the SRS. Include both functional and non-functional requirements.
3. **Review**:
   Review the SRS to ensure it includes all necessary technical details and is consistent with the BRD.

Part 5: Creating the FRD (Functional Requirements Document)

1. **FRD Structure**: Use the following format:
   - **Introduction**: Overview of the system's functionality.
   - **Functional Requirements**: Detailed descriptions of how each feature will work, including user stories, input/output, error messages, and UI mockups (if applicable).
   - **System Workflow**: Flowcharts or diagrams depicting system workflows.

- **Business Rules**: Any specific rules that the system must follow.
- **Data Requirements**: Description of key data inputs and outputs.

2. **Creating the Document**:
   - Based on the detailed requirements, students will draft the FRD, describing how the system's functional requirements will be implemented.
3. **Review**:
   Ensure the FRD aligns with both the SRS and BRD, providing a detailed, actionable roadmap for the developers.

Part 6: Document Review and Finalization

1. **Peer Review**:
   - Students will exchange documents with a peer for feedback. The review will focus on:
   - Clarity of business goals and requirements.
   - Completeness of functional and non-functional requirements.
   - Consistency between the BRD, SRS, and FRD.
2. **Instructor Review**:
   - After peer review, the instructor will provide feedback, focusing on areas for improvement and ensuring that the documents adhere to industry standards.
3. **Final Revisions**:
   - Students will revise their documents based on feedback. The final version of each document should be submitted at the end of the lab.

Deliverables:

At the end of the lab, students are expected to submit:

1. **BRD**: A high-level document outlining business goals and stakeholder needs.
2. **SRS**: A detailed technical specification of the software system.
3. **FRD**: A detailed functional breakdown of system features and functionality.

Assessment Criteria:

1. **Clarity and Structure**: Proper use of document structure, headers, and formatting.
2. **Completeness**: Each document must contain all required sections and relevant content.
3. **Consistency**: Alignment between the BRD, SRS, and FRD.
4. **Detail**: SRS and FRD should provide sufficient detail for developers to understand what to build.

Conclusion:

By completing this lab, students will gain a practical understanding of how to create critical requirement documents, ensuring alignment between business needs, technical specifications, and functional details. These skills are essential for effective communication between business analysts, project managers, developers, and stakeholders in software development projects.

Lab Tips:

- Make sure the BRD is written in business-friendly language for non-technical stakeholders.
- The SRS should be technical and focus on both functional and non-functional aspects of the system.

- The FRD should be even more detailed, providing a step-by-step breakdown of how the system will fulfill the requirements.