**Q1**

**Project Scope:** Project scope refers to the detailed description of the work required to deliver a project, including its objectives, deliverables, tasks, costs, and deadlines. It defines the boundaries of the project, outlining what is included and what is excluded. The scope ensures that everyone involved has a clear understanding of the project's goals and limitations.

Why is it important to agree and lock the scope first?

1. **Prevents Scope Creep**: Locking the scope ensures that the project stays focused and avoids unnecessary additions that can lead to delays and budget overruns.
2. **Clear Expectations**: It sets clear expectations for stakeholders, team members, and clients, reducing misunderstandings.
3. **Resource Allocation**: A defined scope helps in planning and allocating resources effectively.
4. **Measurable Success**: It provides a baseline to measure project success and ensures deliverables meet the agreed objectives.
5. **Reduces Conflicts**: Agreeing on the scope early minimizes disputes during the project lifecycle.

**Q2**

The existing voting system in Pakistan faces several challenges:

1. **Manual Processes**: Reliance on paper ballots leads to inefficiency and delays in vote counting.
2. **Fraud and Rigging**: Lack of transparency and accountability increases the risk of vote tampering.
3. **Accessibility Issues**: Voters in remote areas face difficulties in reaching polling stations.
4. **Long Queues**: Inefficient processes result in long waiting times, discouraging voter turnout.
5. **Lack of Technology**: Absence of digital tools makes the system outdated and prone to errors.
6. **Security Concerns**: Physical ballots are vulnerable to theft or damage.

**Project Scope Statement for an Online Voting System**

**Project Title**: Development of an Online Voting System

**Objectives**:

1. To create a secure, transparent, and user-friendly online voting platform.
2. To increase voter turnout by making voting accessible to all eligible citizens.
3. To reduce the time and cost associated with traditional voting methods.

**Deliverables**:

1. A fully functional online voting platform with a user interface for voters and administrators.
2. Secure voter authentication and verification mechanisms.
3. A backend system for real-time vote counting and result generation.
4. Documentation and training materials for election officials.

**Exclusions**:

1. Development of hardware devices (ie.  biometric scanners).
2. Physical infrastructure for internet connectivity in remote areas.
3. Legal or policy changes required for implementing online voting.

**Q3**

**Level 1: Online Voting System**

1.1 **Project Planning**

1.1.1 Define Requirements

1.1.2 Create Project Timeline

1.1.3 Allocate Resources

1.2 **System Design**

1.2.1 User Interface Design

1.2.2 Database Design

1.2.3 Security Architecture

1.3 **Development**

1.3.1 Frontend Development

1.3.2 Backend Development

1.3.3 Integration of Modules

1.4 **Testing**

1.4.1 Unit Testing

1.4.2 System Testing

1.4.3 Security Testing

1.5 **Deployment**

1.5.1 Server Setup

1.5.2 User Training

1.5.3 Launch and Monitoring

**Q4**

**Scope Verification:** Scope verification is the process of formally accepting the completed project deliverables and ensuring they align with the agreed-upon scope. It involves reviewing the work and confirming that it meets the project's objectives and requirements.

Why is it important?

1. **Ensures Quality**: It ensures that deliverables meet the required standards.
2. **Stakeholder Satisfaction**: It confirms that the project meets stakeholders' expectations.
3. **Prevents Disputes**: Formal acceptance reduces the risk of disagreements over deliverables.
4. **Project Closure**: It marks the completion of the project and allows for proper handover.

How to Perform Scope Verification in the Online Voting Project:

1. **Review Deliverables**: Compare the online voting platform against the agreed scope and requirements.
2. **Conduct Testing**: Perform user acceptance testing (UAT) to ensure the system works as intended.
3. **Stakeholder Approval**: Present the system to stakeholders for formal acceptance.
4. **Documentation**: Record the verification process and obtain sign-off from stakeholders.
5. **Feedback Loop**: Address any issues or changes before finalizing the project.