Requirements:

In a software engineering projects requirements are very important. The specific requirements of the project will depend the nature and scope of the project. These requirements must be carefully identified and documented and tracked throughout the development process in order to ensure that the software meets the needs of its users.

In our project the requirements are:

- Functional
- Non-Functional

- **Functional Requirements:**

  The specific features and functionalities that the software must provide in order to fulfill the needs of the user. These requirments are typically defined in detailed software requirements specification document.

- **Non- Functional Requirements**:

  Requirements that describe how well the software performs certain tasks or functions, such as its reliability, usability, scalability and security.

External Requirements

External Requirements refer to the factors that are outside the control of the development team but they still affect the project. These requirements are typically related to the environment in which the software will operate and may include:

- Hardware and Software compatibility: Operating systems, browsers, and mobile devices are a few examples of the software that must be compatible with the hardware and software it will run on.

- Legal and Regulatory compliance: Any applicable laws and rules, such as those governing data protection, privacy, and accessibility requirements, must be complied with by the software.

- User needs and expectations: Users' wants and expectations, which may be impacted by elements like demography, culture, and industry norms, must be satisfied by the software.

- Industry standards and best practices: Software development processes, coding standards, and testing frameworks, among others, must all be followed by the program in order for it to be considered compliant.

- System Integration requirements: The software must be able to interface with other programs and platforms with which it may have to communicate, such as third-party programs and APIs.

- Performance and scalability requirements: The software needs to work well and be able to grow with the number of users without sacrificing quality or features.

- Security Requirements: Compliance with security protocols and standards may be necessary for the software to be secure and safeguard user data from unauthorized access.

- Environmental Factors: Depending on the context in which it will be used, the software needs to be able to function under a variety of environmental conditions, such as temperature, humidity, and altitude.

Security, Protection and Authorization&Authentication

Because they specify the measures that must be taken to safeguard the software and its users from potential security threats, security requirements are an essential component of any software engineering project. The nature of the software, the sector in which it operates, and the particular security threats it may face may all influence these requirements. In a software engineering project, common security requirements to take into account include:

- Authentication and Authorization:
  Before accessing sensitive data or functions, users of the software should be required to authenticate themselves, and appropriate authorization controls should be implemented to ensure that users can only access data and functions that they are authorized to use.

- Data Protection:
  In order to prevent data breaches, the software should use appropriate encryption, hashing, and other data protection methods to safeguard user data from unauthorized access, modification, or disclosure.

- Secure Communication:
  The product ought to guarantee that all correspondence between the client and server is secure, utilizing encryption and other security conventions to forestall listening in, man-in-the-center assaults, and different types of capture attempt.

- Access Control:
  The product ought to execute proper access controls to keep unapproved clients from accessing the framework or its assets, and ought to utilize job based admittance control to dole out authorizations in light of client jobs and obligations.

Overall security requirements are critical to the success of any software engineering project, as they help to ensure the safety and privacy of the users and protect the software from potential security threats.