Phase 1: Problem Definition and Design Thinking

Problem Definition:

**Unauthorized Transactions:**

1. Unauthorized charges on a credit card account can leave cardholders with monetary losses and inconveniences.

2. Fraudulent activity may take the form of stolen card data, phishing attacks, or card skimming at ATMs or point-of-sale terminals.

**Theft of identity:**

1. Identity theft is a common component of credit card fraud, when criminals utilize stolen personal data to open new credit card accounts or hijack preexisting ones.
2. Varieties of fraud This can involve account takeover fraud or application fraud, in which thieves use stolen identities to apply for credit cards or access an existing cardholder's account.

**Fraud involving Cards Not Present (CNP)**

1. CNP fraud has grown to be a serious problem as online purchasing has become more popular. It involves fraudulent transactions that don't need a real card.
2. Fraudulent activities include online transactions made using stolen credit card information, which is frequently obtained through data breaches or phishing scams.

Design Thinking:

User Research:

Conduct thorough user research to comprehend the requirements and problems of different stakeholders, such as cardholders, retailers, banks, and law enforcement organizations. Interviews, surveys, and observations might be used in this.

**Persona Development:**

Identify the motives, actions, and pain points of the various user groups affected by credit card fraud in order to create personas that represent them.