# ATM Card Validation using Luhn Algorithm

This document explains how an ATM card number is validated using the Luhn Algorithm, without including the source code implementation.

## Purpose

The purpose of the Luhn Algorithm is to verify the authenticity of card numbers. It ensures that the entered number follows a valid pattern and helps in detecting errors like mistyped digits.

## Steps of the Algorithm

1. The last digit of the card number is considered as the check digit.  
2. The remaining digits are reversed for processing.  
3. Every second digit (from the reversed list) is doubled.  
 - If doubling results in a value greater than 9, then 9 is subtracted from it.  
4. All the processed digits are summed together.  
5. The check digit is added to this total.  
6. If the final sum is divisible by 10, the card number is valid; otherwise, it is invalid.

## Example

Consider the card number: 4649516101066276  
When the Luhn Algorithm is applied, the total sum is divisible by 10. Therefore, the card number is considered valid.