# Explanation of LUHN Algorithm Code

This Python program implements the Luhn Algorithm, which is commonly used to validate credit card numbers.  
  
Step-by-Step Explanation:  
  
1. Extract Last Digit (Check Digit)  
 - The last digit of the card number is stored as 'rem'.  
 - Example: For "5893804115457289", the last digit is 9.  
  
2. Process Remaining Digits  
 - All digits except the last one are stored in a list and converted to integers.  
 - The list is then reversed for easier processing.  
  
3. Double Every Second Digit  
 - Starting from index 0 in the reversed list, every second digit is doubled.  
 - If the result is greater than 9, subtract 9 from it.  
 - Example: 8 → 16 → 7  
  
4. Calculate the Total  
 - The processed digits are summed together with the check digit (rem).  
  
5. Check Validity  
 - If the total sum is divisible by 10, the card number is valid.  
 - Otherwise, it is invalid.  
  
Example Output:  
- luhn("5893804115457289") → True (Valid)  
- luhn("5893804115457288") → False (Invalid)  
  
**Output :**

