def luhn\_algorithm(card\_number):

digits = [int(digit) for digit in str(card\_number)]

digits.reverse()

for i in range(1, len(digits), 2):

doubled = digits[i] \* 2

if doubled > 9:

digits[i] = doubled - 9

else:

digits[i] = doubled

total\_sum = sum(digits)

return total\_sum % 10 == 0

card\_number = 1234567812345670

if luhn\_algorithm(card\_number):

print(f"{card\_number} is a valid number.")

else:

print(f"{card\_number} is not a valid number.")

**Task 2**

**import string**

**def remove\_punctuation(user\_input):**

**# Define all punctuation characters**

**punctuation = string.punctuation**

**result = ''.join([char for char in user\_input if char not in punctuation])**

**return result**

**user\_input = "Hello, world! How's it going?"**

**cleaned\_input = remove\_punctuation(user\_input)**

**print(cleaned\_input)**

**Task 3**

**def bubble\_sort(words):**

**n = len(words)**

**for i in range(n):**

**for j in range(0, n-i-1):**

**if words[j] > words[j+1]:**

**words[j], words[j+1] = words[j+1], words[j]**

**return words**

**text = "banana apple cherry mango"**

**words = text.split()**

**sorted\_words = bubble\_sort(words)**

**sorted\_text = ' '.join(sorted\_words)**

**print(sorted\_text)**