# Jupyter Notebook: Task 4.ipynb

## Markdown Cell

### Syed Fahad Shabbir 040 AI 3B AI lab Task 4

## Markdown Cell

#### Luhn Check

## Code Cell

def luhncheck(card\_number):  
   
 digits = list(map(int, str(card\_number)))  
   
   
 total = 0  
 n = len(digits)  
  
 for i in range(n):  
 d = digits[n - i - 1]   
 if i % 2 == 1:   
 d = d \* 2  
 if d > 9:  
 d = d - 9  
 total += d  
  
   
 return total % 10 == 0  
  
  
  
card = "02301567848305610"  
print("Card:", card)  
print("Is Valid? ->", "Yes" if luhncheck(card) else "No")

## Markdown Cell

#### Remove Punctuation

## Code Cell

import string  
  
def rem\_punc(text):  
 clean = ""  
 for ch in text:  
 if ch not in string.punctuation:   
 clean += ch  
 return clean  
  
sentence = "Hy, what happened here?"  
print("Original:", sentence)  
print("Without punc:", rem\_punc(sentence))

## Markdown Cell

#### Sort Sentence

## Code Cell

def sortsentence(sentence):   
 words = sentence.split()   
 sorted\_each\_word = [''.join(sorted(word)) for word in words]  
 sorted\_words = sorted(sorted\_each\_word, reverse=True)  
 result = " ".join(sorted\_words)  
 return result  
  
sentence = "fahad is learning python"  
print("Orig.:", sentence)  
print("Sorted in letters:", sortsentence(sentence))

## Code Cell