Cryptography Project

Project 1: - Luhn Algorithm

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6th Semester "A"

CODE: -

```
# Luhn algorithm
# Returns true if given card number is valid
def checkLuhn(cardNo):
        nDigits = len(cardNo)
        nSum = 0
        isSecond = False

        for i in range(nDigits - 1, -1, -1):
                d = ord(cardNo[i]) - ord('0')

                if (isSecond == True):
                        d = d * 2

                # We add two digits to handle cases that make two digits after
doubling
                nSum += d // 10
```

```
            nSum += d % 10
            isSecond = not isSecond

    if (nSum % 10 == 0):
            return True
    else:
            return False

# Driver code
#List of valid card numbers:
  #79927398713
  #111111111111119
  #2222222222222224
  #33333333333330
#Invalid cards
  #2222222222222222
  #111111111111111

if __name__=="__main__":

    cardNo = input("Enter a card no.:")

    if (checkLuhn(cardNo)):
            print("This is a valid card")
    else:
            print("This is not a valid card")
```

OUTPUT : -

```
>>>
= RESTART: C:/Users/aditi/Documents/Semester 6/Cryptography Assignments/Luhn_Alg
orithm.py
Enter a card no.:79927398713
This is a valid card
>>>
= RESTART: C:/Users/aditi/Documents/Semester 6/Cryptography Assignments/Luhn_Alg
orithm.py
Enter a card no.:2222222222222222
This is not a valid card
>>>
```