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**Mini project LUHN algorithm**

**Introduction:**

The LUHN algorithm is also known as mod 10 algorithm or LUHN formula, is a simple checksum formula used to validate identification number. it is commonly used in real life application to verify credit and debit card numbers, sim card serial number and other verification. its main purpose is to detect accidental error such as mistyped or incorrectly entered digits.

**Advantages:**

* It helps in error detection and detects the common mistakes like entering the wrong digits.
* The algorithm is simple and requires very little computation and works quickly.
* It only relies on the digits of the numbers itself and don’t need extra storage.
* It is industry standard used by credit companies.

**Disadvantages:**

* It only detects the little error like a single digit mistake and swapping but the large mistake can still pass as valid.
* A number that passes the LUHN algorithm can be valid but it can be a stolen card because it does not tells the name of owner.
* Since the algorithm is simple and public so anyone can generate a number that passes a check.
* It is not an encryption and security method it is only a basic checksum.

**Conclusion:**

The conclusion is simple that we use LUHN algorithm to check the credit and debit card that it is valid or not.

* **Write a python program to remove the punctuation from the given string ?**

**In this question we take string as an input of our choice and add some punctuation symbol in it and then remove them using sort function using python language .**

* **Write a python program to sort the sentence in alphabetical order ?**

In this question we take a sentence like our name and sort it in alphabetical order .

For example : apple if we sort it it will be “ aelpp”

**Thanks you for viewing my work………..**