الغاية - Limit

الغاية وهي أحد المفاهيم الأساسية في الرياضيات وبشكل خاص في التفاضل والتكامل والتحليل الرياضي ويقصد بها أن متغير ما تابع لمتغير آخر تقترب قيمته اعتباطيا من ثابت ما لأن المتغير الآخر يتغير بطريقة محددة وتكمن أهمية الغاية في أنها تستعمل لتعريف مفاهيم أساسية أخرى في الرياضيات كالاستمرارية والاشتقاقية والتكامل.

Limit-Algorithm

خوارزمية الغاية: وهي خوارزمية قمت ببرمجتها عن طريق لغة البرمجة بايثون عن طريق مكتبة تسمى Sympy وهي مكتبة حساب علمية من في لغة البرمجة بايثون مع نظام حوسبة قوية للرمز لإكمال مشكلات الحساب مثل التقييم متعدد الحدود، القرار، معادلة حل، التكامل، المعادلة تفاضلية، توسيع المرحلة، عملية المصفوفة الخ... وأما بالنسبة للخوارزمية فهي تقوم بحساب الـ Limit وعند تشغيل الاداة يمكنك ادخال الأمر Help لمعرفة جميع الخيارات وطريقة ادخال المعادلات وحسابها كما في الصورة التالية:

```
C:\Users\Mafia7x>python Limit-Algorithm.py
#Welcome to the Limit-Algorithm#
[+] Enter help for options
[+] Limit-Algorithm > Help
    [+] ** To raise the forces
[+] *for multiplication
    [+] +,- The process of addition and subtraction
       / for the division process
    [+] s.sin(x) Trigonometric ratios You can replace sin with a non-ratio
       Enter C to add the compensation value and also to change the compensation value 
Enter EQ to add the equation and also to change the equation
    [+] Enter FL to perform
[+] Enter Exit To Exit
       Enter FL to perform the equation
[+] Limit-Algorithm > C
 Enter numerical values only
+| Enter the compensation value > -1
[+] Limit-Algorithm > EQ
[+] Enter the equation > (x**2+3*x)
[+] Limit-Algorithm > FL
[+] Result: -2
+| Limit-Algorithm > _
```

الكود البرمجي الخاص بالخوارزمية

```
1 import sympy as s, sys
2 x = s.Symbol('x')
3 y, i, n, a, b, f, g = s.symbols('y i n a b f g') 4 print("\n"+"#"*32)
  6 print("#"*32+"\n[+] Enter help for options")
                                 LA = input("\n[+] Limit-Algorithm > ")
                                      if LA = 'help' or LA = 'Help':
                       [+] ** To raise the forces
                         [+] *for multiplication
                          [+] +,- The process of addition and subtraction
                            [+] s.sin(x) Trigonometric ratios You can replace sin with a non-ratio
                             [+] Enter C to add the compensation value and also to change the compensation value
                             [+] Enter EQ to add the equation and also to change the equation
                               [+] Enter FL to perform the equation
                              [+] Enter Exit To Exit
                                                                            c = int(input("[+] Enter the compensation value > "))
                                                                          print("\n[+] Enter numerical values only mf")
c = int(input("[+] Enter the compensation value > ")).
                                                  if LA = 'EQ' or LA = 'eq':
                                                                       print("\n[+] Enter a valid equation mf")
                                                     if LA = 'FL' or LA = 'FL':
                                                                                cept:
    print("[+] There is an error in the value or equation you entered, re-enter the
    print("[+] There is an error the equation by entering fg").
                                                                    try:

r = (s.limit(eq. ×, c))

r = (s.limit(eq. ×, c))

print(f*\n[+] Result: {r}*)
                               print(*[+] There is an error in the value or equation you

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print(*[+] There is an error in the
                          42
43 except:
5V5.exit()
```

ويمكنك ايضا رؤية الكود المصدري من خلال Github

https://github.com/Mafia7x/Limit-Algorithm