**数据报告5**

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**实验题目：**1.绘制正方形螺旋线

2.统计字符个数

3.羊车门问题：有3扇关闭的门，一扇门后面停着汽车，其余门后是山羊，只有主持人知道每一扇门后面是什么。参赛者可以选择一扇门，在开启它之前，主持人会开启另一扇门，露出后面是山羊，然后允许参赛者跟换自己的选择。请问：参赛者跟换选择后能否增加猜中汽车的机会？

4.田字格的输出

**算法实现：1. import turtle**

**edge = 200**

**turtle.setup(500,500,-200,-200)**

**while edge > 5:**

**theta = 90**

**turtle.seth(theta)**

**turtle.fd(edge)**

**theta = theta - 90**

**turtle.seth(theta)**

**turtle.fd(edge)**

**edge = edge - 5**

**theta = theta - 90**

**turtle.seth(theta)**

**turtle.fd(edge)**

**theta = theta - 90**

**turtle.seth(theta)**

**turtle.fd(edge)**

**edge = edge – 5**

**2.** **n\_alphabet = 0**

**n\_number = 0**

**n\_space = 0**

**n\_other = 0**

**s = input('请输入一行字符')**

**for c in s:**

**if 'A' <= c <= 'Z' or 'a' <= c <= 'z':**

**n\_alphabet += 1**

**elif '0' <= c <= '9':**

**n\_number += 1**

**elif c == ' ':**

**n\_space += 1**

**else:**

**n\_other += 1**

**print('有{0}个英文字符，{1}个数字，{2}个空格和{3}个其它字符'.format(n\_alphabet, n\_number, n\_space, n\_other))**

**3. from random import \***

**N = 1000000**

**sequence = ['车','羊1','羊2']**

**first\_guess\_count = 0**

**change\_guess\_count = 0**

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

**guess = choice(sequence)**

**if guess == '车':**

**first\_guess\_count += 1**

**else:**

**change\_guess\_count += 1**

**print("改变选择获胜的概率：{:.4f}；坚持选择获胜的概率：{:.4f}".format(first\_guess\_count / N, change\_guess\_count / N))**

**4.** **for i in range(11):**

**for j in range(11):**

**if i%5 == 0:**

**if j%5 == 0:**

**print("+ ", end='')**

**else:**

**print("- ", end='')**

**else:**

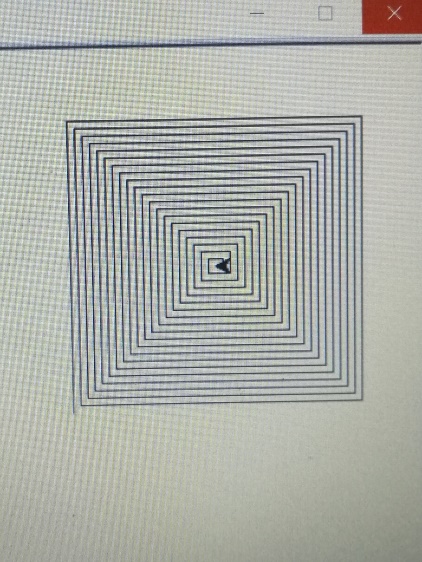
**if j%5 == 0:**

**print("| ", end='')**

**else:**

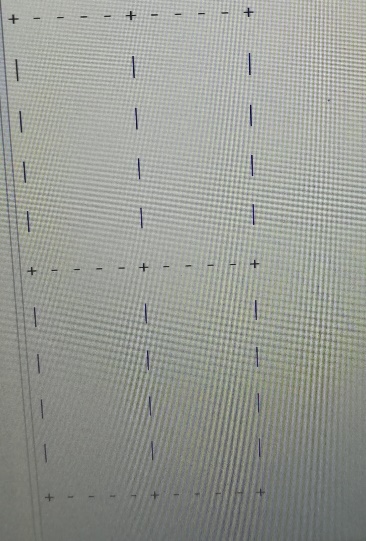
**print(" ", end='')**

**print("\n")**

**实验果：1..** ****

**2.出现“请输入一行字符”字样，输入字符得到结果**

**3.改变选择获胜概率：0.3333 坚持选择获胜概率：0.6667**

**4.** ****