

PROGRAMMING EXERCISE 4

1. Write a program that takes an integer that is keyed in from the terminal and extracts and displays each digit of the integer in English. So, if the user types in 932, then the program should display nine three two (Remember to display “zero” if the user types in just a 0).

Evidence 1: Your program code

2. Write a program that calculates the sum of the digits of an integer. For example, the sum of the digits of the number

2155 is 2+1+5+5 or 13.

The program should accept any arbitrary integer typed in by the user.

Evidence 2: Your program code

3. An input file **records.txt** contains 10 records. Sample of input file:

1,2
3,4
5,6
7,8
9,10
11,12
13,14
15,16
17,18
19,20

Each record contains two values. The first value is x and the second value is y . Write a program that calculates z according to the equation

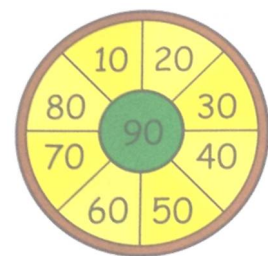
$$z = \sum_{1}^{10} (x^2 - y^2)$$

Output the values of x , y and z in table form on the screen and an output file **results.txt**.

Evidence 3: Your program code

Evidence 4: Create an input file (**records.txt**) and capture a screenshot of running the program.

4. The numbers on the dartboard is the number of points scored when a dart lands on it. Jay has three darts. He has to score a total of exactly 200 points to win a remote control drone. Write a program to find the number of ways for him to score exactly 200 points with three darts. (Scoring 20, 90, 90 is considered a different way than scoring 90, 90, 20.)



Evidence 5: Your program code