

Exercise 1: Sales Commission Calculator

One large chemical company pays its salespeople on a commission basis. The salespeople receive \$200 per week plus 9% of their gross sales for that week. For example, a salesperson who sells \$5000 worth of chemicals in a week receives \$200 plus 9% of \$5000, or a total of \$650.

Develop a program that will input each salesperson's gross sales for last week and will calculate and display that salesperson's earnings. The number of employees in the company is given by the user. A sample of input/output is given below.

Sample input/output

Enter number of employees: 3

Enter sales in dollars for employee 1: 5000

Employee 1 salary is: 650

Enter sales in dollars for employee 2: 1234.56

Employee 2 salary is: 311.11

Enter sales in dollars for employee 3: 3451

Employee 3 salary is: 510.59

Exercise 2: Printing, Sum and Product

Develop a program that reads two integer values from the user (n_1 and n_2) and print the following:
□ All numbers between them inclusive
□ The result of the sum and product of all numbers between them inclusive
We suppose in this exercise that the user will enter $n_1 < n_2$. A sample of input/output is given below.

Sample input/output

Enter n_1 : 5 Enter n_2 : 10 The numbers between 5 and 10 inclusive are: 5 6 7 8 9 10 Sum of numbers between 5 and 10 inclusive is: 45 Product of numbers between 5 and 10 inclusive is: 151200

Exercise 3: Perfect Number

Develop a program to check whether a given number is perfect. A perfect number is a positive integer that is equal to the sum of its proper positive divisors, that is, the sum of its positive divisors excluding the number itself. For example: 6 is a perfect number, because 1, 2, and 3 are its proper positive divisors, and $1 + 2 + 3 = 6$. 16 is not a perfect number, because 1, 2, 4 and 8 are its proper positive divisors, and $1 + 2 + 4 + 8 = 15$ (and not 16). Samples of input/output are given below.

Sample input/output 1

Enter a number: 6 6 is a perfect number

Sample input/output 2

Enter a number: 16 16 is not a perfect number

Exercise 4: Digit Extraction

Write a Program that prompt the user for an integer and then

- Print the digits separated by space in the reverse order
- Print the number of digits
- Print the sum of digits.

A sample of input/output is given below.

Sample input/output

Enter a positive integer: 532

The digits of 532 in the reverse order are: 2 3 5

The number of digits is: 3

The sum of digits is: 10