Programming Fundamentals

Exercise 1

Write a program that accepts an integer parameter n and that returns the integer formed by removing the odd digits from n. The following table shows several calls and their expected return values:

Sample input	output
8342116	8426
4109	40
8	8
3052	2
7010496	46
35179	0

Exercise 2

Write a program that accepts an array of integers as a parameter and returns the percentage of even numbers in the array as a real number. For example, if a variable named nums refers to an array of the elements {6, 2, 9, 11, 3}, then the program should return 40.0. If the array contains no even elements or no elements at all, return 0.0.

Exercise 3

Find frequency of each digit in a given integer:

Input any number: 122345	Input any number: 22522217
The frequency of 0 = 0	The frequency of 0 = 0
The frequency of 1 = 1	The frequency of 1 = 1
The frequency of 2 = 2	The frequency of 2 = 5
The frequency of 3 = 1	The frequency of 3 = 0
The frequency of 4 = 1	The frequency of 4 = 0
The frequency of 5 = 1	The frequency of 5 = 1

The frequency of 6 = 0 The frequency of 7 = 0 The frequency of 8 = 0 The frequency of 9 = 0	The frequency of 6 = 0 The frequency of 7 = 1 The frequency of 8 = 0 The frequency of 9 = 0

Exercise 4

Print a number in words:

Input any number: 8309 Eight Three Zero Nine	Input any number: 25089 Two five zero eight nine

Exercise 5

Write a program that accepts an integer array and sort that array by using selection sort algorithm (as discussed in the class)

Exercise 6

Write a C++ program to find and print all distinct elements of a given array of integers

Original array: 1 5 7 5 8 9 11 11 2 5 6

Unique elements of the said array: 1 5 7 8 9 11 2 6