

1. (硬體庫存) 你是一家硬體商店的老闆，需要有一份庫存表，告訴你擁有哪些工具、擁有的數量以及每個工具的成本。請編寫一個程式，將檔案“hardware.dat”初始化為 100 筆空的記錄，讓您輸入跟每個工具相關的資料，讓你能夠列出所有工具、刪除不再擁有的工具記錄，並讓您更新文件中的任何資訊。工具識別號碼應為記錄編號。請使用以下資訊來啟動你的檔案：

紀錄編號	工具名稱	數量	成本
3	電動砂光	7	57.98
17	鐵鎚	76	11.99
24	線鋸	21	11.00
39	除草機	3	79.50
56	電鋸	18	99.99
68	螺絲起子	106	6.99
77	大鎚	11	21.50
83	扳手	34	7.50

2. 寫一個程式命名為 oddeven.cpp，用於產生一萬個隨機產生的整數，並將其分類成兩個檔案。其中，奇數存入 odd.dat 檔案中，而偶數存入 even.dat 檔案中。

[提示] • 可以使用亂數函式。例如: `number = rand();`

• 使用傳值呼叫，以 % 運算子檢查奇數或偶數。如果 % 2 是零，則為偶數。

否則，為奇數。

3. 寫一個程式創建一個檔案 numbers.dat , 至少包含十個小於 1 百萬的正整

數 , 如:

27
3
189
43
1280
7
16
9

寫一個程式命名為readnum.cpp , 使用 “while”迴圈從檔案檔案numbers.dat
讀取數字。印出所有數字總合、最大值的數字、最小值的數字, 如: 總合是
1574、最大是1280、最小是3

1. (**Hardware Inventory**) You're the owner of a hardware store and need to keep an inventory that can tell you what tools you have, how many you have and the cost of each one. Write a program that initializes the file "hardware.dat" to 100 empty records, lets you input the data concerning each tool, enables you to list all your tools, lets you delete a record for a tool that you no longer have and lets you update *any* information in the file. The tool identification number should be the record number. Use the following information to start your file:

Record #	Tool name	Quantity	Cost
3	Electric sander	7	57.98
17	Hammer	76	11.99
24	Jig saw	21	11.00
39	Lawn mower	3	79.50
56	Power saw	18	99.99
68	Screwdriver	106	6.99
77	Sledge hammer	11	21.50
83	Wrench	34	7.50

2. (**Odd or Even**) Write a program named oddeven.cpp that generates 10,000 random integers and sorts them into two files. Put the odd integers into odd.dat and the even integers into even.dat. Here are a few hints to help you: • You can generate a random number with the rand function. For example: number = rand(); • Please write a call-by-value function that uses the modulo operator, %, to check whether a number is even or odd. If number % 2 is zero, then number is even. Otherwise it's odd.
3. (**Compute Sum**) Create a data file called numbers.dat that contains a column of at least ten positive integers smaller than 1 billion, like this:

27
3
189
43
1280
7
16
9

Write a program called readnum.cpp that uses a "while" loop to read the numbers

from numbers.dat. Make the program print out the sum of all of the numbers, the value of the largest number, and the value of the smallest number, like this:
Sum is 1574 Largest is 1280 Smallest is 3