CSCI 2170   OLA 5

Write a C++ program named "**inventory.cpp**" that simulates inventory bins in a warehouse. Each bin holds several the same type of parts. The program should use a **structure** that keeps the following data:

Description of the part kept in the bin

Number of parts in the bin

The program should have an array of 10 bins. The parts carried by the warehouse are shown in the table below:

Part Description	Number of parts in the bin
Valve	10
Bearing	5
Bushing	15
Coupling	21
Flange	7
Gear	5
Gear Housing	5
Vacuum Gripper	25
Cable	18
Rod	12

Your program should read the information about the 10 parts carried by this warehouse from a data file named "inventory.dat". Here is the format of the data file:

Valve
10
Bearing
5
Bushing
15
Coupling
21
Flange
7
Gear
5
Gear Housing
5
Vacuum Gripper
25
Cable
18
Rod
12

The program should have the following 3 functions:

- *AddParts* – Increases a specific bin's part count by a specified number.
- *RemoveParts* – Decrease a specific bin's part count by a specified number.
- *Display* – Prints the part name and number of parts in the bin in a table format (with 2 columns as shown above)

The program simulates the maintenance operations performed at the warehouse. Assume that the maintain operations have been recorded in a data file named "operations.dat". Part of the "operations.dat" file is shown below:

Add
Flange
3
Remove
Rod
2
Remove
Gear Housing
1
Add
Valve
5
…

When the program runs, it should repeat a loop that performs the following steps til the end of data is reached:
- Read the first line of an operation step
- If the operation is "Add", read the part name and quantity, and add to the part count
- If he operation is "Remove", read in the part name and quantity, and subtract the part count

Your program output should consist of the display of the table of parts and their quantities once before the operations are performed, and once after the operations steps are performed.

Here is an example output of the program:

Warehouse inventory before the operations

Part	Quantity
Valve	10
Bearing	5
Bushing	15
Coupling	21
Flange	7
Gear	5
Gear Housing	5
Vacuum Gripper	25
Cable	18
Rod	12

Warehouse inventory after the operations

Part	Quantity
Valve	15
Bearing	22

Bushing	10
Coupling	35
Flange	26
Gear	10
Gear Housing	4
Vacuum Gripper	42
Cable	52
Rod	10