#include <iostream>

#include <fstream>

#include "item.h"

using namespace std;

void loadDataset(Item\*\* &itemArr, int &N, string fileName){

//Open the file

ifstream inFile;

inFile.open(fileName.c\_str());

//Read the first line

string line;

getline(inFile,line);

N = atoi(line.c\_str());

//Allocate space for all items in the file

itemArr = new Item\*[N];

//Read each item and load into the array

int i = 0;

while(getline(inFile,line)){

int ind1 = line.find("#");

int ind2 = line.find("#",ind1+1);

int ind3 = line.find("#",ind2+1);

int ind4 = line.find("#",ind3+1);

int ind5 = line.find("#",ind4+1);

int ID = atoi(line.substr(0,ind1).c\_str());

int type = atoi(line.substr(ind1+1, ind2-ind1-1).c\_str());

int price = atoi(line.substr(ind2+1, ind3-ind2-1).c\_str());

string name = line.substr(ind3+1, ind4-ind3-1);

if(type == 1){//If the item is a Pen

string inkColor = line.substr(ind4+1, ind5-ind4-1);

float pointSize = atof(line.substr(ind5+1).c\_str());

//Create a Pen object and send it to item array

itemArr[i] = new Pen(ID,type,price,name,inkColor,pointSize);

}

else if (type == 2){//If the item is a Folder

string color = line.substr(ind4+1, ind5-ind4-1);

bool expanding = atoi(line.substr(ind5+1).c\_str());

//Create a Folder object and send it to item array

itemArr[i] = new Folder(ID,type,price,name,color,expanding);

}

else{//If the item is a Paper

string size = line.substr(ind4+1, ind5-ind4-1);

int quantity = atof(line.substr(ind5+1).c\_str());

//Create a Paper object and send it to item array

itemArr[i] = new Paper(ID,type,price,name,size,quantity);

}

i++;

}

inFile.close();

}

int main(){

string fileName = "dataset.txt"; //Dataset file

//Item array to hold all different items

Item\*\* itemArr;

//Size of the array

int N;

//Load the array with items

loadDataset(itemArr,N,fileName);

//Print all items in the array

for(int i=0;i<N;i++){

itemArr[i]->print();

cout << "--> DISCOUNTED PRICE: $" << itemArr[i]->discountPrice(0.15) << endl;

}

return 0;

}