

程式設計作業(四)

主題：檔案存取練習

利用檔案存取觀念，配合前次設計的圖書資料查詢程式，將其中與圖書資料有關的陣列內容，存於一般文字檔中，由程式讀出來，並存到對應的陣列中，執行前次作業的使用者查詢功能。執行時亦將使用者所查詢的資料寫入紀錄檔，例如，書籍名稱與資料等，另外可寫入交易資料檔之資訊如借閱第幾本書、查詢過程等等。

如原程式之設計已具彈性，則只需從檔案起始處讀入所需陣列的大小，程式碼可不需大幅修改；如覺得原程式之設計需重做修改，則根據此次檔案資料設計的架構與資料讀取順序作修正。

修改利用 Visio 繪製的流程圖，補上檔案存取的控制功能，貼在 Word 說明文件中，說明文件中應詳細解說檔案資料的讀取與寫入方式。程式中應儘量加註解說明變數意義。

繳交檔案包括程式原始碼(Java)及說明文件檔(Word)，壓縮後以學號為名之 rar 或 zip 檔(學號_hw04.rar)，如 104007001_hw04.doc，上傳至 <http://140.128.65.120:8000/DataUpload> 傳檔前請務必依照所修課程班別確認選擇的課程名稱為 CompLang，否則將無法收到。

繳交時間：6 月 1 日上課前

附錄：簡易版大富翁，如對圖書資料處理興趣不大者，可參考附錄程式設計單人版遊戲，亦利用檔案資料存取的概念，讀取遊戲資料，並將遊戲紀錄寫入檔案。

附錄參考程式: Traveller.java

```
import java.util.Scanner;

/**
 * @author snowlin
 */
public class Traveller {

    public static void main(String[] args) {
        // TODO code application logic here
        String[] country = {"Start Box", "Korea", "China", "Agentina", "Brazil",
            "Jail", "United Kingdom", "Mexico", "Swiss", "Swiden",
            "Chance", "Germany", "Greece", "France", "Italy",
            "Fate", "Taiwan", "Hong Kong", "Japan", "United States"};
        int[] price = {-2000, 500, 700, 200, 400,
            10000, 5000, 1500, 6000, 5500,
            0, 4500, 2500, 3500, 1500,
            0, 2000, 1000, 3000, 4000};
        int dice ;
        int money = 10000, count = 0, round = 0 ;
        boolean playcheck ;
        Scanner sc = new Scanner(System.in) ;
        do {
            playcheck = false ;
            dice = (int)(Math.random() * 1000) % 6 + 1 ;
            System.out.println("You are dicing " + dice + " steps") ;
            count = count + dice ;
            int m = count / country.length ;
            if(m > round) { // Pass the start box, deposit 2000
                money = money + 2000 ;
                System.out.println("You are passing the start box, you earn 2000\n"
                    + "You now have " + money) ;
                round = round + 1;
            }
            int n = count % country.length ;
            int withdraw ;
            if(country[n].equals("Chance")) {
                int chance, sign ;
```

```

        if(Math.random() > 0.5) { // Check if plus of minus money
            sign = 1 ;
        } else {
            sign = -1 ;
        }
        chance = (int)(Math.random() * 100) * sign ; // Create bonus
        withdraw = chance ;
    } else if(country[n].equals("Fate")) {
        int fate, sign ;
        if(Math.random() > 0.5) { // Check if plus of minus money
            sign = 1 ;
        } else {
            sign = -1 ;
        }
        fate = (int)(Math.random() * 100) * sign ; // Create bonus
        withdraw = fate ;
    } else if(country[n].equals("Jail")) { // Pay penalty in jail
        System.out.println("You are in " + country[n] +
            ", you have to pay " + price[n] + " for freedom!") ;
        withdraw = price[n] ;
    } else {
        System.out.println("You are visiting " + country[n] +
            ", it costs " + price[n] + "\n" +
            "Do you want to buy it?(Yes/No)" ) ;
        String buy = sc.next() ;
        if(buy.toUpperCase().charAt(0) == 'Y') {
            withdraw = price[n] ;
        } else {
            withdraw = 0 ;
        }
    }
    money = money - withdraw ;
    System.out.println("You are viviting " + country[n] + ", you pay " +
        withdraw) ;
    System.out.println("Your money is: " + money) ;
    if(money < 0) {
        playcheck = false ;
    } else {

```

```
System.out.println("Do you want to continue?(Yes/No)");  
String check = sc.next();  
if(check.toUpperCase().charAt(0) == 'Y') {  
    playcheck = true;  
} else {  
    playcheck = false;  
}  
}  
} while(playcheck);  
System.out.println("You have money: " + money);  
}  
}
```