

SdPd/Java Lab Exam 2

Objective: Coin Collection

Write a java program to maintain a coin collection using a sequential text file.

1. **Download** the lab exam 2 **zip** file and extract the folder, **Save** the zipped folder on the **desktop** (not the local C drive, USB or network account)
 - Rename the **LastNameFirstNameLabEx2** folder and starter java program as per your own name
 - E.g. **AgnewGerryLabEx2** folder/**AgnewGerryLabEx2.java** program file
 - To be **verified** by your lab supervisor
 - Verify the contents of the input text file “**Coin.dat**” using NotePad
2. Add your **Program Id, Name & Program Description as comments** at the top of the java program
3. Remember to rename the starter **class** as per your java program name and **Save, Compile and Run** the program **before** you write any code
 - Alert your supervisor if the program does not run initially
4. **10%** of the marks are for the Algorithm form (write your name at the top of the first page) which must be submitted at the end of the lab exam
5. **Warning:**
Marks will be lost for **bad programming practices** such as:
 - Lacking meaningful variable names, white-space, indentation, etc.
 - Ensure redundant code is deleted prior to program submission
6. **File / Record Layout:**
Each record consists of the following details about each coin:

– Year (integer)	– e.g. 1900
– Name (string max 10)	– e.g. Penny
– Face Value (double)	– e.g. 0.01
– Metal (character)	– e.g. c/C (case insensitive) → Copper
– Country (string max 10)	– e.g. US
– Sale Price (integer) * 3	– e.g. 1000 (last 3 sale prices)
7. **Screenshots:**
Refer to the attached Screenshots to clarify the below requirements
8. **Constants / Variables:**
Declare constants and variables as appropriate with meaningful names and types
9. **Initialise:**
Initialise any necessary variables

10. Main Processing / File Input:

- Using an EOF controlled **while** loop read each coin record from the file until there are no more records to be processed
- Read the 3 sale prices for each coin using an inner **for** loop

11. Line Output:

Display formatted coin details: Year, Name, Metal, Country, Face Value, and the 3 Sales Prices including the calculated Average Price as shown

- Metal name displayed with a **switch** based on the Metal type character where: c/C → Copper, s/S → Silver, & g/G → Gold otherwise Unknown

12. Header Output:

Display the program header including **your name** aligned as specified

13. Footer Output:

After all the coin records have been processed display the following:

- Coin / Copper / Silver / Gold and Unknown counts
- Oldest coin is: **Dollar** from year **1855** (hint: lowest year)
- Most valuable coin is: **1911 Sovereign** sold for **16999**
- **6** records output to: **US** country file

14. Output Report:

Output the entire screen contents to a report file called "CointReport.dat"

- Located in the same folder to be verified using NotePad (or equivalent)

15. Input and Message Dialogues:

- Get the Country name using a seeded (US) **Input dialogue** as shown in the screenshot
- Output the footer info using a **Message dialogue** with appropriate Title and Icon as shown in the screenshot

16. Output File CoinCountry:

Write selected coin records to an output text file called "CoinCountry.dat" for the specified country name (case insensitive string comparison) using an input dialog to obtain the country name

- Using the exact same record layout/format as for the Coin file
- Located in the same folder to be verified using NotePad (or equivalent)
- With only the final sale price if unable to save all 3 sale prices

17. Close Files:

Close all the file objects

18. Save – The End:

- When finished Save and Exit TextPad
- **Zip** (R/click: Send Compressed) → LastNameFirstNameLabEx2 folder
- **Upload** LastNameFirstNameLabEx2 zip file to Moodle link provided
- To be verified by your supervisor before you submit the zip file
- Backup your lab exam folder to your **root** network account
- Sign the **attendance sheet** before you exit the lab

Coin.dat - Notepad						
File	Edit	Format	View	Help		
1900	Penny	0.01	c US	1000	1700	1450
1911	Sovereign	1.00	g eNgLaNd	16000	16500	16999
1922	Crown	0.25	C US	3500	3800	3100
1933	Dime	0.10	S us	8999	8666	8111
1944	Nickel	0.05	c us	300	300	300
1855	Dollar	1.00	S uS	2500	2501	2502
1866	Doubloon	2.00	G Spain	1333	1389	1331
1877	Shilling	0.05	s England	9800	9000	9300
1888	Florin	1.00	G Italy	560	510	550
1889	Quarter	0.25	x us	6600	6550	6800

C:\WINDOWS\system32\cmd.exe								
Gerry Agnew - Lab Exam 2 (Jan 2012)								
Year	Name	Metal	Country	Face Val	Sale 1	Sale 2	Sale 3	Aver
1900	Penny	Copper	US	0.01	1000	1700	1450	1383
1911	Sovereign	Gold	eNgLaNd	1.00	16000	16500	16999	16499
1922	Crown	Copper	US	0.25	3500	3800	3100	3466
1933	Dime	Silver	Us	0.10	8999	8666	8111	8592
1944	Nickel	Copper	us	0.05	300	300	300	300
1855	Dollar	Silver	uS	1.00	2500	2501	2502	2501
1866	Doubloon	Gold	Spain	2.00	1333	1389	1331	1351
1877	Shilling	Silver	England	0.05	9800	9000	9300	9366
1888	Florin	Gold	Italy	1.00	560	510	550	540
1889	Quarter	Unknown	us	0.25	6600	6550	6800	6650
Coin count: 10								
Copper count: 3								
Silver count: 3								
Gold count: 3								
Unknown count: 1								
Oldest coin is: Dollar from: 1855								
Most valuable coin is: 1911 Sovereign sold for: 16999								
6 records output to: US country file								

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CoinReport.dat - Notepad
File Edit Format View Help
Gerry Agnew - Lab Exam 2 (Jan 2012)
Year Name Metal Country Face Val Sale 1 Sale 2 Sale 3 Aver
=====
1900 Penny Copper US 0.01 1000 1700 1450 1383
1911 Sovereign Gold eNgLaNd 1.00 16000 16500 16999 16499
1922 Crown Copper US 0.25 3500 3800 3100 3466
1933 Dime Silver us 0.10 8999 8666 8111 8592
1944 Nickel Copper us 0.05 300 300 300 300
1855 Dollar Silver uS 1.00 2500 2501 2502 2501
1866 Doubloon Gold Spain 2.00 1333 1389 1331 1351
1877 Shilling Silver England 0.05 9800 9000 9300 9366
1888 Florin Gold Italy 1.00 560 510 550 540
1889 Quarter Unknown us 0.25 6600 6550 6800 6650

Coin count: 10
Copper count: 3
Silver count: 3
Gold count: 3
Unknown count: 1

Oldest coin is: Dollar from: 1855
Most valuable coin is: 1911 Sovereign sold for: 16999
6 records output to: US country file

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CoinCountry.dat - Notepad
File Edit Format View Help
1900 Penny 0.01 c US 1000 1700 1450
1922 Crown 0.25 C US 3500 3800 3100
1933 Dime 0.10 S US 8999 8666 8111
1944 Nickel 0.05 c us 300 300 300
1855 Dollar 1.00 S uS 2500 2501 2502
1889 Quarter 0.25 x us 6600 6550 6800

```

Oldest coin is: Dollar from: 1855

Most valuable coin is: 1911 Sovereign sold for: 16999

6 records output to: US country file