

# COSC 1336 -- Fundamentals of Programming I

## Exam 2 Project

Name \_\_\_\_\_

Write a program that will manage the bank statement of AllyBaba.. Make sure that we follow all the programming **styles (20% of the grade)** that we have learned in class:

- proper variable names
- use of functions
- readability
- comments/documentation

### Project Description

Write a program to help you balance your checkbook at the end of the month. The program should have **the user enter the initial balance** followed by **a series of transactions**. For each transaction, first have the user enter a transaction type. The valid transaction types are:

- C - process a check.
- D - process a deposit.
- E - perform end of month processing and exit the program.

For checks and deposits, the user should be prompted to enter the transaction amount.

### Service Charges

- There is a \$0.25 service charge for each check written. Keep a running total of the service charges.
- Service charges are not deducted from the account balance until the end of the month.

### Output

After each transaction, print

- the command data (to confirm the transaction)
- the resulting account balances
- the total service charges accrued so far

At the end of the month, deduct the service charges and print the final balance. Your program output should look something like this example (user input is shown in bold).

### Input validation

- If the transaction type is invalid, print an informative error message. Ignore the current transaction and have the user enter the next transaction.
- The transaction amount should be a positive number (larger than zero). If it is not, print an informative error message. Ignore the current transaction and have the user enter the next transaction.

### Other requirements

- Do not use global variables in any assignment. A global variable is a variable that is declared outside any function.
- All dollar amounts should be printed with 2 decimal places.

# COSC 1336 -- Fundamentals of Programming I

## Exam 2 Project

Name \_\_\_\_\_

### SAMPLE RUN (User entry is in RED)

User's Entry

AllyBaba Bank Monthly Statement

Enter the beginning balance: **900**

-----  
Select Transaction Type:

C - Process a check

D - Process a deposit

E - Exit

Enter transaction type: **C**

Enter Check amount: **50.25**

Processing Check for \$50.25

Processed Check for \$50.25

Current Balance: \$849.75

Service charge: \$.25 for writing a check

Accrued service charges: \$.25

-----  
Select Transaction Type:

C - Process a check

D - Process a deposit

E - Exit

Enter transaction type: **C**

Enter Check amount: **250**

Processing Check for \$250.00

Processed Check for \$250.00

Current Balance: \$599.75

Service charge: \$.25 for writing a check

Accrued service charges: \$.50

-----  
Select Transaction Type:

C - Process a check

D - Process a deposit

E - Exit

# COSC 1336 -- Fundamentals of Programming I

## Exam 2 Project

Name \_\_\_\_\_

Enter transaction type: **D**  
Enter transaction amount: **200**  
Processing Deposit of \$200.00

Processed Deposit of \$200.00  
Current Balance: \$799.75  
Accrued service charges: \$.50

-----  
Select Transaction Type:  
C - Process a check  
D - Process a deposit  
E - Exit

Enter transaction type: **E**  
Processing end of month

-----  
End of Month Summary

-----  
Current Balance:           \$799.75  
Accrued service charges:   \$.50  
End of month balance:     \$799.25

Date Stamp:  
-----