

JAVA PROGRAMMING (53)

Technical Task (Part 2 of 2)

State– 2008

TOTAL POINTS _____ (100)

Failure to adhere to any of the following rules will result in disqualification:

- 1. Contestant must hand in this test booklet and all printouts. Failure to do so will result in disqualification.***
- 2. No equipment, supplies, or materials other than those specified for this event are allowed in the testing area. No previous BPA tests and/or sample tests or facsimile (handwritten, photocopied, or keyed) are allowed in the testing area.***
- 3. Electronic devices will be monitored according to ACT standards.***

Complete and submit on or before FEBRUARY 15, 2008 to:

Susan Craig, Judged Events Coordinator
Huntley Project High School
1477 Ash Street, Worden, MT 59088

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JAVA PROGRAMMING TECHNICAL TASK
STATE 2008
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Using Java programming, you have been hired by The Bank of BPA to create a software program that their loan officers can use in-house to quickly input and view the specified data about their customers. Be sure you comment your code so that other programmers can edit when needed. Use good formatting techniques for readability.

The Bank of BPA needs the following programs created:

Bank account that can be created with a \$0 balance or a given balance and is updated through deposits and withdrawals. A test should also be created to test the bank account class and its subclasses. Use the following parameters for the test class:

Deposit = \$10,000

Make a transfer from the savings to checking = \$2,000

Withdraw = \$1,500

Withdrawal = \$80

Transfer from savings to checking = \$1,000

Withdrawal = \$400

Add interest and deduct fees for end of month

Print out the results when you run the test class.

A checking account that has no interest, gives you ten transactions per month, and charges a \$2.00 transaction fee for each additional transaction. This account must keep track of the number of transactions to account for transaction fees. Also, be sure to include a fee deduction variable to deduct the monthly fees and to reset the transaction counter every month.

A savings account earns interest at a fixed rate 5% interest that compounds monthly using the balance of the last day of the month and adds this amount to the account balance each month. This account must reject withdrawals for other than the full balance. Don't forget a method to calculate interest earned on the savings account.

Lastly, create a class as a conduit to a random-access file called bank.txt. This program will open the data file, get the number of accounts in the file, and close the data file in addition to reading and writing data. Print out the results when you run the class.

File names to use (turn in printouts of each file):

SavingsAccount.java

CheckingAccount.java

BankAccount.java

AccountTest.java

BankData.java

BankDataTest.java

Reader.java (reads data from the bank.txt file)

bank.txt