Zopa Technical Test

There is a need for a rate calculation system allowing prospective borrowers to obtain a quote from our pool of lenders for 36 month loans. This system will take the form of a command-line application.

You will be provided with a file containing a list of all the offers being made by the lenders within the system in CSV format, see the example market.csv file provided alongside this specification.

You should strive to provide as low a rate to the borrower as is possible to ensure that Zopa's quotes are as competitive as they can be against our competitors'. You should also provide the borrower with the details of the monthly repayment amount and the total repayment amount.

Repayment amounts should be displayed to 2 decimal places and the rate of the loan should be displayed to one decimal place.

Borrowers should be able to request a loan of any £100 increment between £1000 and £15000 inclusive. If the market does not have sufficient offers from lenders to satisfy the loan then the system should inform the borrower that it is not possible to provide a quote at that time.

The application should take arguments in the form:

    cmd> [application] [market_file] [loan_amount]

Example:

    cmd> quote.exe market.csv 1500

The application should produce output in the form:

    cmd> [application] [market_file] [loan_amount]
    Requested amount: £XXXX
    Rate: X.X%
    Monthly repayment: £XXXX.XX
    Total repayment: £XXXX.XX

Example:

  cmd> quote.exe market.csv 1000
  Requested amount: £1000
  Rate: 7.0%
  Monthly repayment: £30.78
  Total repayment: £1108.10

Remarks:

- Please write your solution in Java
- Your code should be tested to the appropriate degree.
- The solution should exhibit readability, modularity and good use of abstraction.
- The monthly and total repayment should use monthly compounding interest.
- If you have any questions then don't hesitate to contact us.