

Task Overview:

The task is to build a small application to rate telephone calls based on some sample data, a simple tariff sheet and some rules. You will be sent the sample data as a separate CSV file; it should contain around 8500 records.

The application should be developed in Java 1.7+, and should execute on Windows/Linux/OSX. We request that you use Maven for build management.

Here's a brief description of the call data format in the CSV file:

Customer CLI	Telephone Number	Call Date	Call Time	Duration	Destination	Time Band
The originating number	The dialed destination	Date of the Call	Time of the Call	Duration of the call	The tariff destination	Peak/OffPeak/Weekend

The output is expected to be another CSV with the same data format, but an additional column 'Cost' containing the cost in £ to 2 decimal places of each call.

Here is the tariff to apply:

	Peak	Off Peak	Weekend
CANADA	10	-10%	-10%
DENMARK	4.9	-8%	-8%
FRANCE	3.23	-8%	-8%
IRELAND	3.22	-10%	-5%
SPAIN	9.33	-10%	-5%
UK Mobile	2.1	-12%	-100%
UK National	0.73	-3%	-3%
USA	12.22	-3%	-5%

The peak rate for each destination gives the pence per minute rate at which we charge the call. For instance, a 2 minute call to Canada at peak time would cost 20p.

RULE 1 – rates are quoted PER MINUTE but applied PER SECOND, so a 30 second call to Canada at Peak time will cost 5p.

RULE 2 – all calls have a minimum cost of 5p. so a 20 second call to Canada at Peak time will still cost 5p.

RULE 3 – Off Peak and Weekend discounts are applicable, as percentage reductions of the Peak rate. For example, a 1 Minute call to Canada at Off-Peak times will cost 9p.

RULE 4 – Any calls that do not match a tariff above must be output to a separate CSV file called 'unmatched.csv'.

Extra Credit:

If you find yourself with extra time, you can attempt these two additional features:

- 1) Output a third CSV file that contains a summary by day per Customer CLI. The format of the CSV should be: Date,CLI,TotalCost, and should include the costs summarised by CLI per day.
- 2) Add functionality to give every Customer CLI 60 free minutes of UK National & UK Mobile calls. Anything over the 60 minutes is charged as per normal.