

The Breathe Life insurance company would like to build a new system that will enable it to underwrite term life insurance policies for potential customers in realtime.

You have been hired to build this system.

## Overview

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The system will take the input in the file input.csv and implement the various calculations described below. The output can be a table on a web page or a simple file named output.csv or output.json.

You should feel free to use any technology you think might showcase your skills best.

## Insurance Qualification Rules

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- \* A potential customer will be accepted with a regular premium if they have a perfect score
  - \* A potential customer will be referred to a follow up interview if they have more than 50 debits
  - \* A potential customer will be charged 1.15x if they have more than 75 debits
  - \* A potential customer will be charged 1.25x if they have more than 100 debits
  
  - \* Each of the following will cause a 15 point debit
    - \* A hit on DEPRESSION
    - \* A hit on ANXIETY
    - \* A BMI below 18.5
  
  - \* Each of the following will cause a 25 point debit
    - \* A hit on SURGERY
    - \* Being a smoker
    - \* BMI above 25.0
    - \* Alcohol consumption above 10 drinks per week
  
  - \* Each of the following will cause a 30 point debit
    - \* A hit on HEART
    - \* BMI above 30.0
    - \* Alcohol consumption above 25 drinks per week

BMI information is from this chart:

\* [https://www.cdc.gov/healthyweight/assessing/bmi/adult\\_bmi/index.html](https://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/index.html)

The formula is:  $\text{weight (kg)} / [\text{height (m)}]^2$

Premium Calculation

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Here's a simplistic chart to calculate coverage price:

- \* Male, 18-40, Non Smoker: \$0.10
- \* Female, 18-40, Non Smoker: \$0.10
  
- \* Male, 18-40, Smoker: \$0.25
- \* Female, 18-40, Smoker: \$0.25
  
- \* Male, 40-60, Non Smoker: \$0.30
- \* Female, 40-60, Non Smoker: \$0.30
  
- \* Male, 40-60, Smoker: \$0.55
- \* Female, 40-60, Smoker: \$0.55

The dollar amount is the cost of insuring \$1,000 per year.

Example: Male, 40-60, Smoker, 500k coverage => \$275/year or \$22.92/month

In the output of the program, please calculate the score for each potential customer and the prices per month they should pay.

Example output.csv:

```
```csv
name,BMI,score,monthly premium
david,28.1,30,4.38
```
```

Evaluation

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- \* Code readability
  - \* Code organization
  - \* All the business rules are considered
  - \* Demonstrates knowledge of programming language

Bonus points for:

- \* Test coverage
- \* Error handling
- \* Data validation
- \* Interesting thoughtful details not described in the requirements