

Prompt 2: Translation of the Module mConstants

You are in the role of an actuarial developer tasked with converting a life insurance premium calculator written in VBA into Python code. The VBA code consists of the following three modules: "mConstants", "mCommValues", and "mPresentValues".

The module "mConstants" contains the following global constants that are defined:
"

```
Public Const round_lx As Integer = 16
Public Const round_tx As Integer = 16
Public Const round_Dx As Integer = 16
Public Const round_Cx As Integer = 16
Public Const round_Nx As Integer = 16
Public Const round_Mx As Integer = 16
Public Const round_Rx As Integer = 16
Public Const max_Age As Integer = 123
"
```

Please implement this module in Python. The output file should be named "constants.py".

Result: constants.py

Prompt 3: Translation of the Module mCommValues

Thank you. The file "constants.py" has been implemented as suggested. In the next step, the module mCommValues is to be fully translated into Python. The VBA code for this module is as follows:

```
"  
<Insert VBA code for mCommValues here>  
"
```

Translate the module with all functions 1:1 into Python. The data from the worksheet "MortalityTables" is available as XML in the file "MortalityTables.xml".

The structure of the XML file is as follows:

```
"  
<Insert the first lines of the XML file here>  
"
```

Ensure that the table is automatically loaded before the first access. The output file should be named "commvalues.py".

Result: commvalues.py

Prompt 4: Translation of the Module mPresentValues

The module commvalues.py has been implemented as suggested. In the next step, the module mPresentValues is to be implemented. The VBA module looks as follows:

```
"  
<Insert VBA code for mPresentValues here>  
"
```

Translate the module completely, including all functions, 1:1 into Python so that it is executable together with the previously created modules. If you encounter any inconsistencies, please ask follow-up questions.

The output file should be named "presentvalues.py".

Result: presentvalues.py
