

Exercises: User Defined Functions

You can check your solutions here: <https://judge.softuni.org/Contests/3140/User-Defined-Functions>.

Queries for SoftUni Database

1. Salary Level Function

Write a function `ufn_GetSalaryLevel(@salary DECIMAL(18,4))` that receives **salary of an employee** and returns the **level of the salary**.

- If salary is < 30000 return "Low"
- If salary is **between 30000 and 50000 (inclusive)** return "Average"
- If salary is > 50000 return "High"

Example

Salary	Salary Level
13500.00	Low
43300.00	Average
125500.00	High

2. Define Function

Define a function `ufn_IsWordComprised(@setOfLetters, @word)` that returns **true** or **false** depending on that if the word is comprised of the given set of letters.

Example

SetOfLetters	Word	Result
oistmiahf	Sofia	1
oistmiahf	halves	0
bobr	Rob	1
pppp	Guy	0

Queries for Bank Database

3. Future Value Function

Your task is to create a function `ufn_CalculateFutureValue` that accepts as parameters – **sum (decimal)**, **yearly interest rate (float)** and **number of years(int)**. It should calculate and return the future value of the initial sum rounded to the **fourth digit** after the decimal delimiter. Using the following formula:

$$FV = I \times ((1 + R)^T)$$

- **I** – Initial sum
- **R** – Yearly interest rate
- **T** – Number of years

Example

Input	Output
Initial sum: 1000 Yearly Interest rate: 10% years: 5 ufn_CalculateFutureValue(1000, 0.1, 5)	1610.5100

Queries for Diablo Database

You are given a **database "Diablo"** holding users, games, items, characters and statistics available as SQL script. Your task is to write some stored procedures, views and other server-side database objects and write some SQL queries for displaying data from the database.

Important: start with a **clean copy of the "Diablo" database on each problem**. Just execute the SQL script again.

4. *Scalar Function: Cash in User Games Odd Rows

Create a **function ufn_CashInUsersGames** that **sums the cash of odd rows**. Rows must be ordered by cash in descending order. The function should take a **game name** as a **parameter** and **return the result as table**. Submit **only your function in**.

Execute the function over the following game names, ordered exactly like: **"Love in a mist"**.

Output

SumCash
8585.00

Hint

Use **ROW_NUMBER** to get the rankings of all rows based on order criteria.