Problem 2

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function: tan(x)
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1 Introduction

All requirements below are written according to the section 5.2.4-5.2.8 in 29148-2018 - ISO/IEC/IEEE International Standard - Systems and software engineering – Life cycle processes – Requirements engineering[1]

2 Requirements' Set

1. Requirement 1
    - Identification:FR1
    - Version Number:1.0
    - Owner:Cheng Chen
    - Stakeholder Priority:High
    - Risk:Low
    - Description:The user shall make sure his/her input data is in radians, not degrees.
    - Rationale: For the convenience of calculating and implementing the algorithm. The function tan(x) program only supports the radians input.
    - Difficulty:Easy
    - Type:Functional Requirement
2. Requirement 2
    - Identification:FR2
    - Version Number:1.0
    - Owner:Cheng Chen
    - Stakeholder Priority:High
    - Risk:Low
    - Description:The user shall make sure his/her input data is double number, which can only contain numbers in 0 9, and period ".".
    - Rationale: For avoiding error of calculating. The function tan(x) program only supports the input of double number type
    - Difficulty:Easy
    - Type:Functional Requirement
3. Requirement 3
    - Identification:FR3
    - Version Number:1.0
    - Owner:Cheng Chen
    - Stakeholder Priority:Medium
    - Risk:Low

- Description:The user shall input only one double number in one input operation.
- Rationale:For the convenience of calculating. The function tan(x) program only supports one input in one input operation.
- Difficulty:Easy
- Type:Functional Requirement

4. Requirement 4

   - Identification:NFR1
   - Version Number:1.0
   - Owner:Cheng Chen
   - Stakeholder Priority:High
   - Risk:Low
   - Description:The user must run this tan(x) function in a computer with JRE(Java Runtime Environment) installed.
   - Rationale:This tan(x) function is programmed in Java programming language and Java program can't run without JRE(Java Runtime Environment). Therefore, the user must install JRE to run this function.
   - Difficulty:Easy
   - Type:Non-Functional Requirement

3 Assumptions

1. For the convenience of calculating, The input x should be in radian
2. If the input is not a number, the function will ask the user to input again.
3. The output is between $-\infty \quad +\infty$

Referenties

[1] "ISO/IEC/IEEE International Standard - Systems and software engineering – Life cycle processes – Requirements engineering". In: *ISO/IEC/IEEE 29148:2018(E)* (2018), p. 1–104. DOI: 10.1109/IEEESTD.2018.8559686.