
Problem 2

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function: $\tan(x)$

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SOEN 6011: Software Engineering Processes

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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:1.0.0
- 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:1.0.0
- 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 only 1 period ".", which must be placed between numbers.
- 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:1.0.0
- 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:1.0.0
- 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. Type "java -version" in the terminal and press enter key to see if Java has been installed on your computer
- 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 radians.
2. If the input isn't a number, the function offers the error handling, which will make the user input again.
3. The output is between $-\infty$ and $+\infty$

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.