**The 1st practice report**

**Student ID： Class： Name：**

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# Practice 2：Analyze the reduction of calculations

**【Goal】**Compare the Polynomial-time of two algorithms。

Design two algorithms to solve the following function, Let *x* = 0.1, 1, 2, separately

 (1)

**【Configuration】**

CPU：

Memory：

OS：

**【Algorithm description】**

Algorithm 1：

Algorithm 2：

**【Analyzing results】**

Table1 Algorithm comparison

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *x* | Algorithm | *f(x)* | Multiplication | addition | time(second) |
| 0.1 | 1 |  |  |  |  |
| 2 |  |  |  |  |
| 1 | 1 |  |  |  |  |
| 2 |  |  |  |  |
| 10 | 1 |  |  |  |  |
| 2 |  |  |  |  |

Discussing：

**【Algorithm 1 source codes】**

|  |
| --- |
| Source codes |

**【Algorithm 2 source codes】**

|  |
| --- |
| Source codes |

# Practice 3：Solve nonlinear equation by using Bisection method

【**Goal**】

【**Analyzing results**】

Table1 Bisection method applied to nonlinear equation

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| iteration | Lower bound *x*low |  | *Upper bound x*up | (*x*up – *x*low)/2 | Sign of *f*((*x*up – *x*low)/2) |
| 0 | 1.3 |  | 1.5 | 1.4 | < 0 |
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Discussing：

【**Source codes**】

|  |
| --- |
| Source codes |

**Additional question：**

For a large number of output data, is there any convenient way to output the list data and paste it to the word document? Or output the data matrix directly to a .txt file?