

# 南开大学

## 计算机网络 课程实验报告

### *TCP/IP* 实验



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# 1 一级标题

整理了在实验报告可能用到的任何元素，**包括图表(及其编号)，树状图，代码块，数学公式，高亮，样式内容块等。**

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测试中文:

通过这次实验，我深刻体会到了同态加密技术的强大和实用性，特别是在保护数据隐私的同时执行复杂计算的能力。使用 *Microsoft SEAL* 库进行加密计算不仅加深了我对同态加密原理的理解，也提升了我的编程技能和解决实际问题的能力。

分点:

1. *Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.*
  2. *Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.*
- *Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.*
  - *Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.*
  - test<sup>1</sup>

terms:

**Fact** If a term list has a lot of text, and maybe other inline content.

**Tip** To make it wide, simply insert a blank line between the items.

测试文本

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[点击跳转链接](#)

这是一个被强调的内容

## 1.1 二级标题

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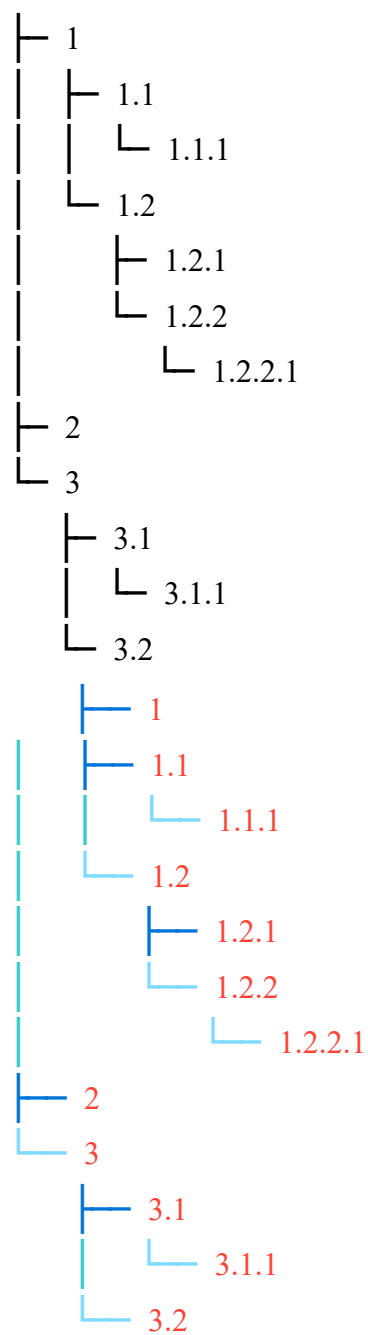
---

<sup>1</sup>测试脚注



图 1.1.1: 南开大学校徽

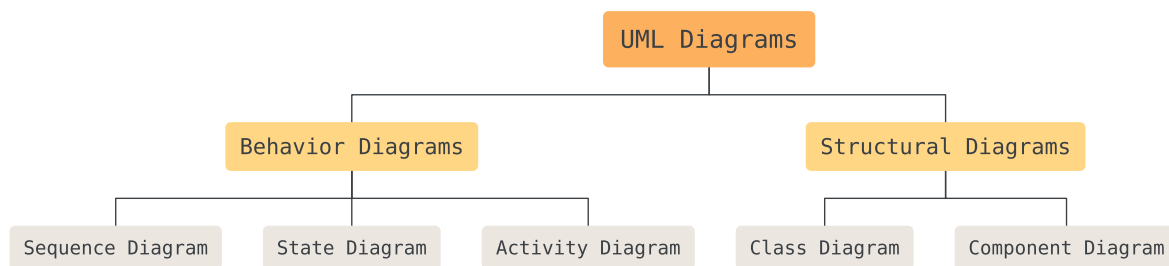
树状图:



## 1.2 测试 cheq

- ☐ Mercury
- ☒ Mars
- ☐ Jupiter
- ☒ Sun

## 1.3 测试 pintora



## 1.4 测试 tablex

Username	Data		Score
	Location	Height	
John	Second St.	180 cm	5
Wally	Third Av.	160 cm	10
Jason	Some St.	150 cm	15
Robert	123 Av.	190 cm	20
Other	Unknown St.	170 cm	25

表 1.4.2: 一个表格

## 1.5 测试 codly

```

1 pub fn main() {
2     println!("Hello, world!");
3 }
    
```

rust

```

1 void MergeSort(int arr[], int left, int right) {
2     if(left >= right) return;
3     int mid = (left + right) >> 1;
4     MergeSort(arr, left, mid);
5     MergeSort(arr, mid + 1, right);
6     int i = left, j = mid + 1, k = 0, temp[right - left + 1];
7     while(i <= mid && j <= right) {
8         if(arr[i] <= arr[j]) temp[k++] = arr[i++];
9         else temp[k++] = arr[j++];
10    }
11    while(i <= mid) temp[k++] = arr[i++];
12    while(j <= right) temp[k++] = arr[j++];
13    for(int i = 0; i < k; i++) arr[left + i] = temp[i];
14 }
    
```

cpp

## 1.6 测试 cetz

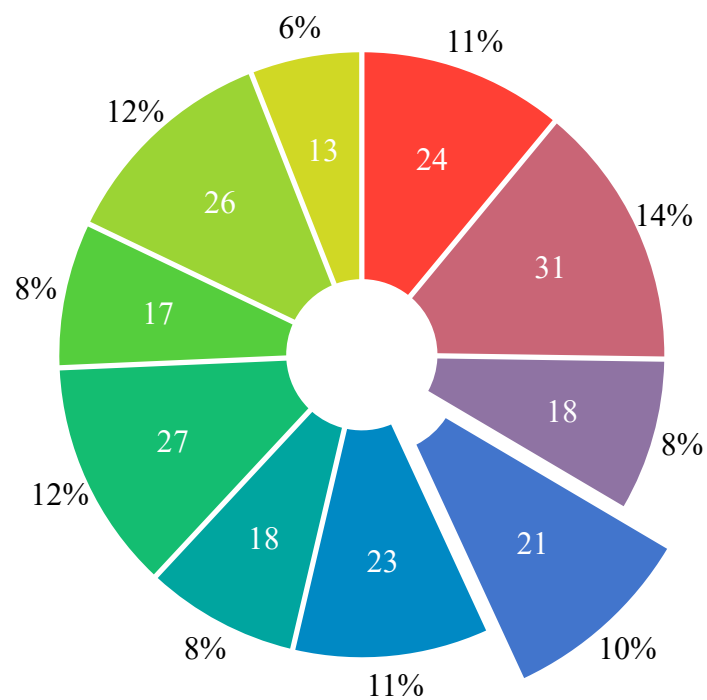


图 1.6.3: 饼图

## 1.7 测试 pinit

A simple highlighted text.

It is simple.



## 1.8 测试 colorbox

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## 1.9 测试 showybox

①

Red-ish showybox with separated sections!

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②

### Clairaut's theorem

Let  $f : A \rightarrow \mathbb{R}$  with  $A \subset \mathbb{R}^n$  an open set such that its cross derivatives of any order exist and are continuous in  $A$ . Then for any point  $(a_1, a_2, \dots, a_n) \in A$  it is true that

$$\frac{\partial^n f}{\partial x_i \dots \partial x_j}(a_1, a_2, \dots, a_n) = \frac{\partial^n f}{\partial x_j \dots \partial x_i}(a_1, a_2, \dots, a_n) \quad (1.1)$$

*This will be useful every*

*time you want to interchange partial derivatives in the future.*

③

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④

### Divergence theorem

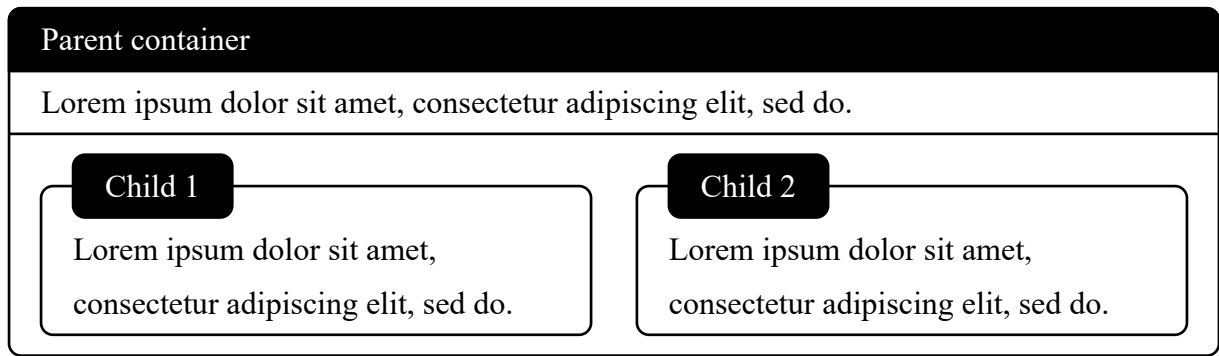
Suppose  $V$  is a subset of  $\mathbb{R}^n$  which is compact and has a piecewise smooth boundary  $S$  (also indicated with  $\partial V = S$ ). If  $\mathbf{F}$  is a continuously differentiable vector field defined on a neighborhood of  $V$ , then:

$$\iiint_V (\nabla \cdot \mathbf{F}) \, dV = \iint_S (\mathbf{F} \cdot \hat{\mathbf{n}}) \, dS \quad (1.2)$$

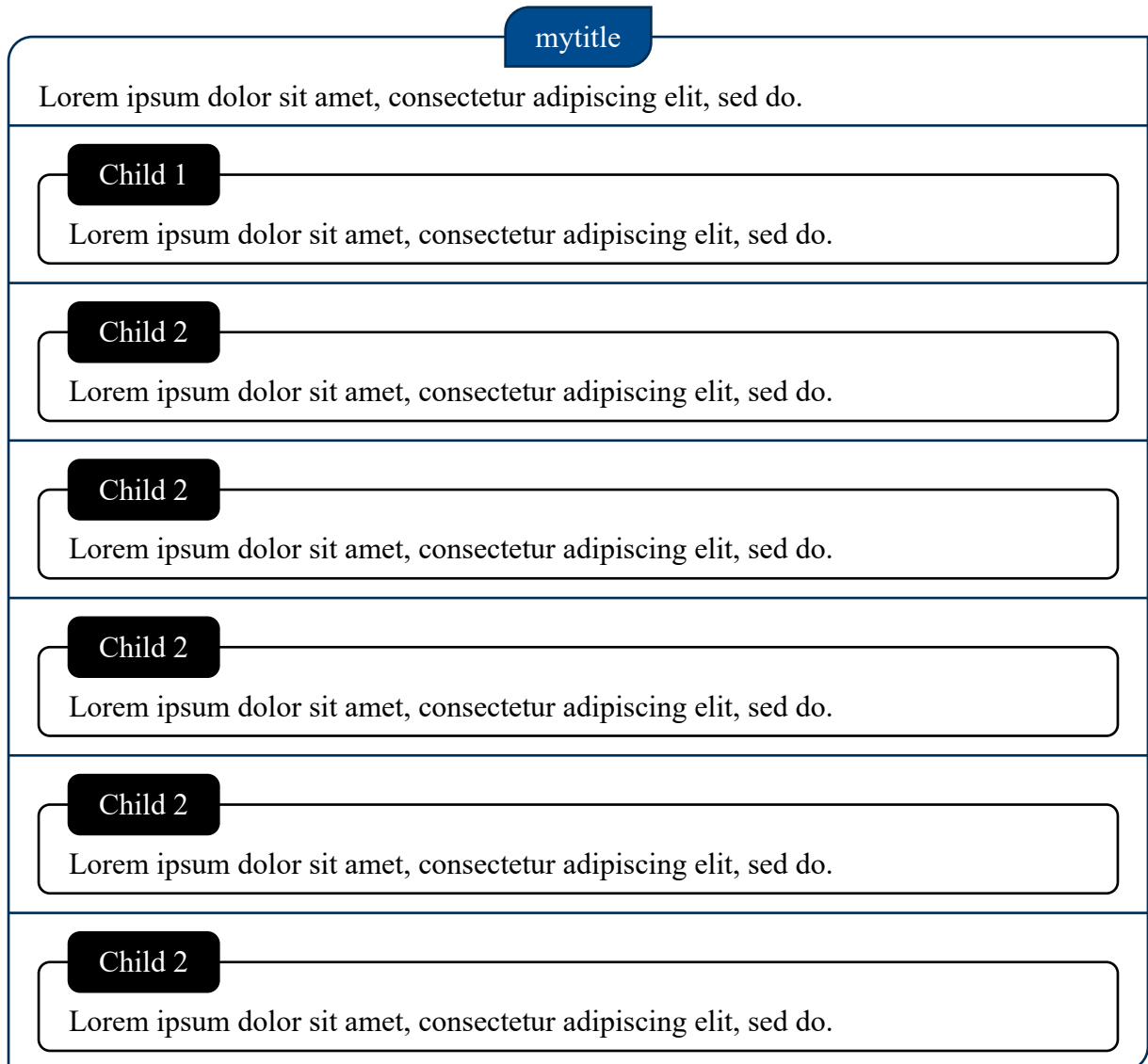
In the case of  $n = 3$ ,  $V$  represents a volume in three-dimensional space, and  $\partial V = S$  its surface

⑤





⑥



⑦

mytitle

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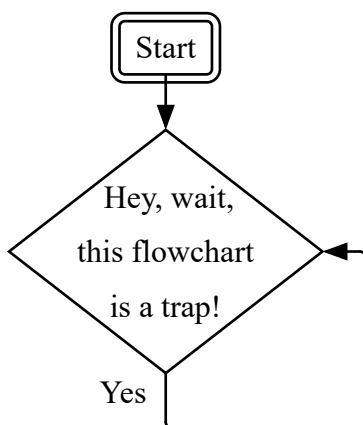
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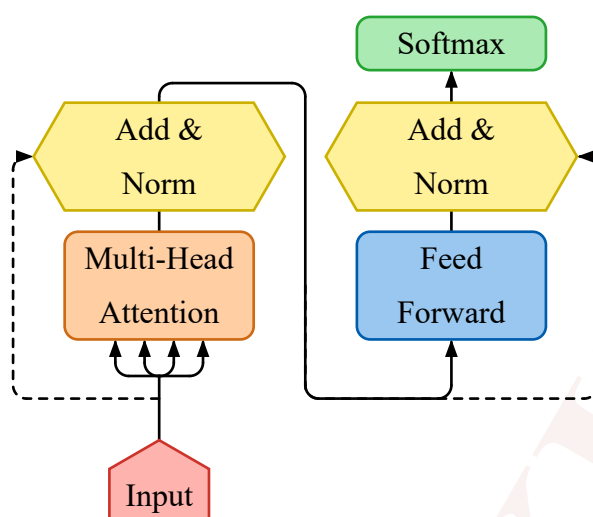
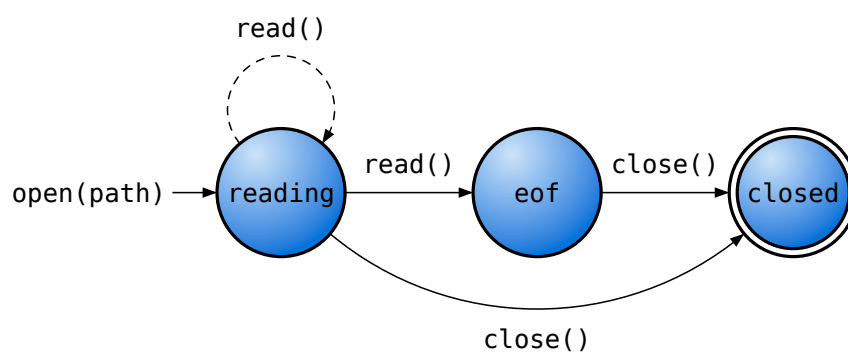
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adipiscing elit, sed do.

Lorem ipsum dolor.

Lorem ipsum dolor sit amet, consectetur  
adipiscing elit, sed do.

## 1.10 测试 fletcher





## 1.11 测试 gentle

### i Info

This is the info clue ...

### 🔥 这是一个测试标题

Check out this cool package

### ? Question

This is the info clue ...

### ” Quote

This is the info clue ...

### 🧪 Example

This is the info clue ...



### Abstract

This is the info clue ...



### Task

This is the info clue ...



### Error

This is the info clue ...



### Warning

This is the info clue ...



### Success

This is the info clue ...



### Conclusion

This is the info clue ...



### Memorize

This is the info clue ...

We should run more tests!

## 1.12 测试 badgery

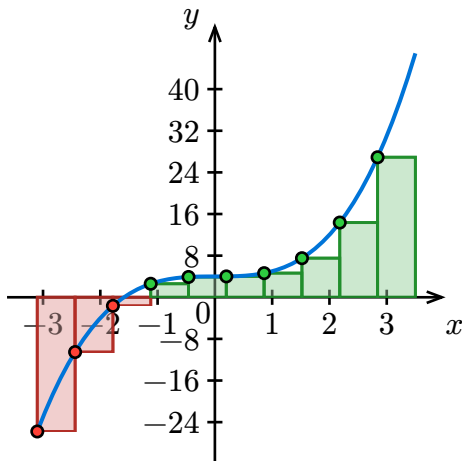
Gray badge
Red badge
Yellow badge

Green badge
Blue badge
Purple badge
Click me

File
New File...

Menu
Sub-menu
Sub-sub menu
Action

## 1.13 测试 riesketcher



### 1.14 测试 syntree

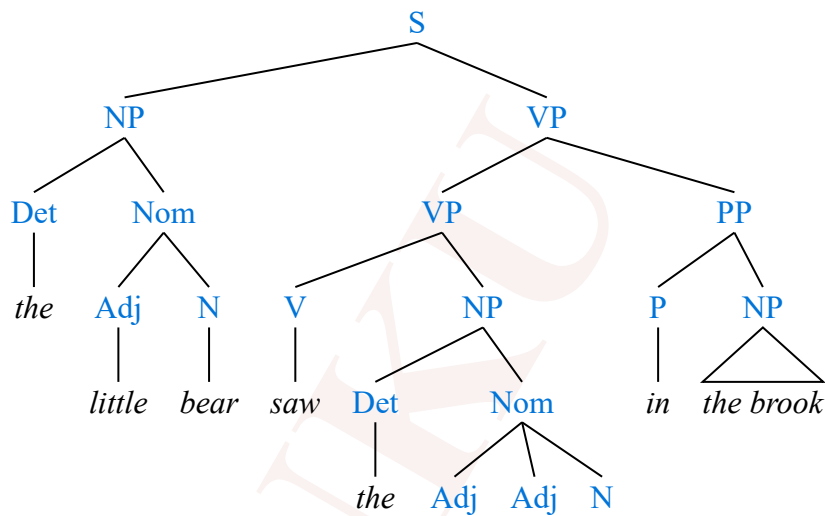


图 1.14.4: Example of a syntax tree.

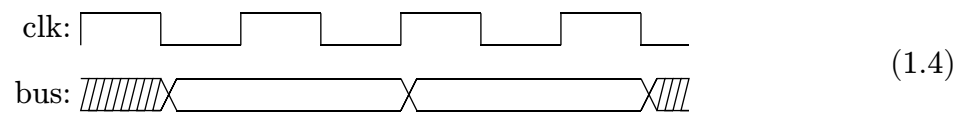
### 1.15 测试 physica

$$A^T, \nabla \times \mathbf{E} = -\frac{\partial \mathbf{B}}{\partial t}, \quad \Lambda^\mu{}_\nu = \begin{pmatrix} 1 & \\ & \mathbb{R} \end{pmatrix}, \quad f(x, y) \, dx \, dy, \quad d^3 \mathbf{x} \, dy, \quad \Delta^2 x \wedge \Delta^2 y, \quad \frac{D\varphi}{Dt} = \frac{\partial \varphi}{\partial t} + \mathbf{u} \nabla \varphi$$

$$H(f) = \begin{bmatrix} \frac{\partial^2 f}{\partial x^2} & \frac{\partial^2 f}{\partial x \partial y} \\ \frac{\partial^2 f}{\partial y \partial x} & \frac{\partial^2 f}{\partial y^2} \end{bmatrix}, \quad \mathbf{v}^a = \sum_{i=1}^n \alpha_i \hat{\mathbf{u}}^i, \quad \left\{ (x, y) \mid \frac{\partial^3 f}{\partial x^2 \partial y} + \frac{\partial^3 f}{\partial x \partial y^2} < \varepsilon \right\} \quad (1.3)$$

$$-\frac{1}{c^2} \frac{\partial^2}{\partial t^2} \psi + \nabla^2 \psi = \frac{m^2 c^2}{\hbar^2} \psi, \quad |n^{(1)}\rangle = \sum_{k \notin D} \frac{\langle k^{(0)} | V | n^{(0)} \rangle}{E_n^{(0)} - E_k^{(0)}} |k^{(0)}\rangle, \quad \int_V dV \left( \frac{\partial \mathcal{L}}{\partial \varphi} - \partial_\mu \left( \frac{\partial \mathcal{L}}{\partial (\partial_\mu \varphi)} \right) \right) = 0$$

$$d^2 s = - \left( 1 - \frac{2GM}{r} \right) d^2 t + \left( 1 - \frac{2GM}{r} \right)^{-1} d^2 r + r^2 d^2 \Omega$$



## 1.16 测试 mitex

$$f(x) = \int_{-\infty}^{\infty} \hat{f}(\xi) e^{2\pi i \xi x} d\xi \quad (1.5)$$

## 1.17 测试 unify

$$(-1.328\,65 \pm 0.502\,73) \cdot 10^{-6} \quad (1.6)$$

$$(1.3^{+1.2}_{-0.3}) \cdot 10^3 \text{ erg cm}^{-2} \text{ s}^{-1} \quad (1.7)$$

$$1,123'8 \cdot 10^{-2} - 3,086'8 \cdot 10^5 \quad (1.8)$$

$$(1 \text{ to } 2) \cdot 10^3 \frac{\text{m}}{\text{s}^2} \quad (1.9)$$

## 1.18 测试 easytable

Header 1	Header 2	Header 3
How	I	want
a	drink,	alcoholic
of	course,	after
the	heavy	lectures
involving	quantum	mechanics.

表 1.18.5: 表格示例

Header 1	Header 2	Header 3
How	I	want
a	drink,	alcoholic
of	course,	after
the	heavy	lectures
involving	quantum	mechanics.

Header 1	Header 2	Header 3
How	I	want
a	drink,	alcoholic
of	course,	after
the	heavy	lectures
involving	quantum	mechanics.

图 1.18.6: 表格示例

## 1.19 测试 algo

```

FIB (n):
1  if  $n < 0$ :
2  |   return null
3  if  $n = 0$  or  $n = 1$ :
4  |   return  $n$ 
5
6  let  $x \leftarrow 0$ 
7  let  $y \leftarrow 1$ 
8  for  $i \leftarrow 2$  to  $n - 1$ : ▷ so dynamic!
9  |   let  $z \leftarrow x + y$ 
10 |    $x \leftarrow y$ 
11 |    $y \leftarrow z$ 
12
13 return  $x + y$ 

```

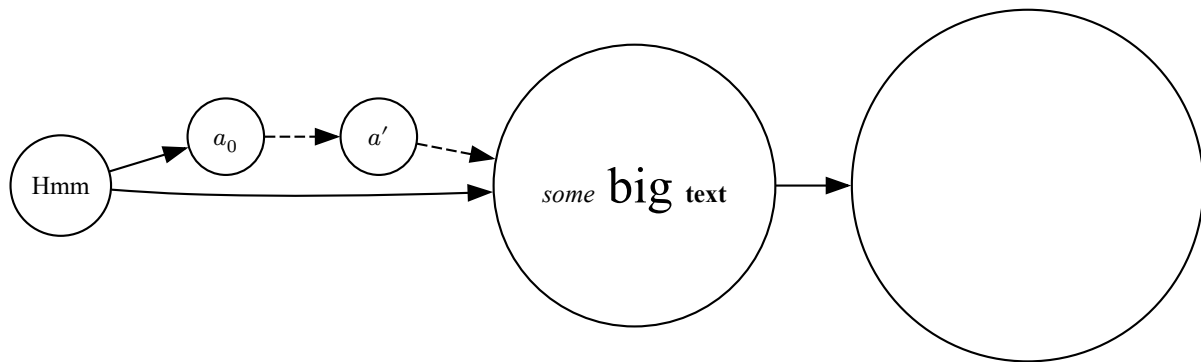
FLOYD-WARSHALL( $V, E, w$ ):

```

1  Let  $\text{dist}[u, v] \leftarrow \infty$  for  $u, v$  in  $V$ 
2  For  $(u, v)$  in  $E$ :
3  |    $\text{dist}[u, v] \leftarrow w(u, v)$                                 // edge weights
4  For  $v$  in  $V$ :
5  |    $\text{dist}[v, v] \leftarrow 0$                                     // base case
6
7  For  $k \leftarrow 1$  to  $|V|$ :
8  |   For  $i \leftarrow 1$  to  $|V|$ :
9  |   |   For  $j \leftarrow 1$  to  $|V|$ :
10 |   |   |   // if new path is shorter, reduce distance
11 |   |   |   If  $\text{dist}[i, j] > \text{dist}[i, k] + \text{dist}[k, j]$ :
12 |   |   |   |    $\text{dist}[i, j] \leftarrow \text{dist}[i, k] + \text{dist}[k, j]$ 
13 |   |   |
14 Return dist

```

## 1.20 测试 diagraph



## 1.21 测试 xarrow

$$\begin{array}{c}
 \begin{array}{ccc}
 a & \xleftarrow{\mathbb{Q}, 1+1^4} & b \\
 c & \overset{\text{very long boi}}{\rightsquigarrow} & d
 \end{array} \\
 \hline
 \begin{array}{ccc}
 & c & \\
 & \text{NP} \sum^* & \\
 a & \twoheadrightarrow & b \times 4
 \end{array}
 \end{array} \tag{1.11}$$

测试参考文献:

文献 1 的内容[1]

文献 2 的内容[2]

## 参考文献

- [1] R. Impagliazzo, R. Paturi, and F. Zane, “Which problems have strongly exponential complexity?,” *Journal of Computer and System Sciences*, vol. 63, no. 4, pp. 512–530, 2001.
- [2] S. Burckhardt *et al.*, “It’s Alive! Continuous Feedback in UI Programming,” *SIGPLAN Not.*, vol. 48, no. 6, pp. 95–104, Jun. 2013, doi: [10.1145/2499370.2462170](https://doi.org/10.1145/2499370.2462170).