

南开大学

计算机网络 课程实验报告

TCP/IP 实验



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目录

1 一级标题	3
1.1 二级标题	3
1.2 测试 cheq	4
1.3 测试 pintora	5
1.4 测试 tablex	5
1.5 测试 codly	5
1.6 测试 cetz	5
1.7 测试 pinit	6
1.8 测试 colorbox	7
1.9 测试 showybox	7
1.10 测试 fletcher	10
1.11 测试 gentle	11
1.12 测试 badgery	12
1.13 测试 riesketcher	12
1.14 测试 syntree	13
1.15 测试 physica	13
1.16 测试 mitex	14
1.17 测试 unify	14
1.18 测试 easytable	14
1.19 测试 algo	15
1.20 测试 diagraph	15
1.21 测试 xarrow	16
参考文献	16

图表

图 1.1.1: 南开大学校徽	4
表 1.4.2: 一个表格	5
图 1.6.3: 饼图	6
图 1.14.4: Example of a syntax tree.	13
表 1.18.5: 表格示例	14
图 1.18.6: 表格示例	14

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。

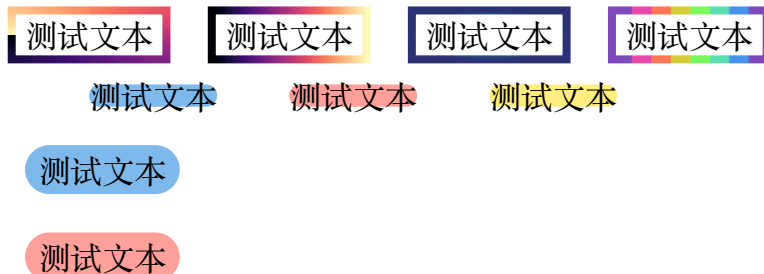
分点:

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.*
 - test¹

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.



[点击跳转链接](#)

这是一个被强调的内容

1.1 二级标题

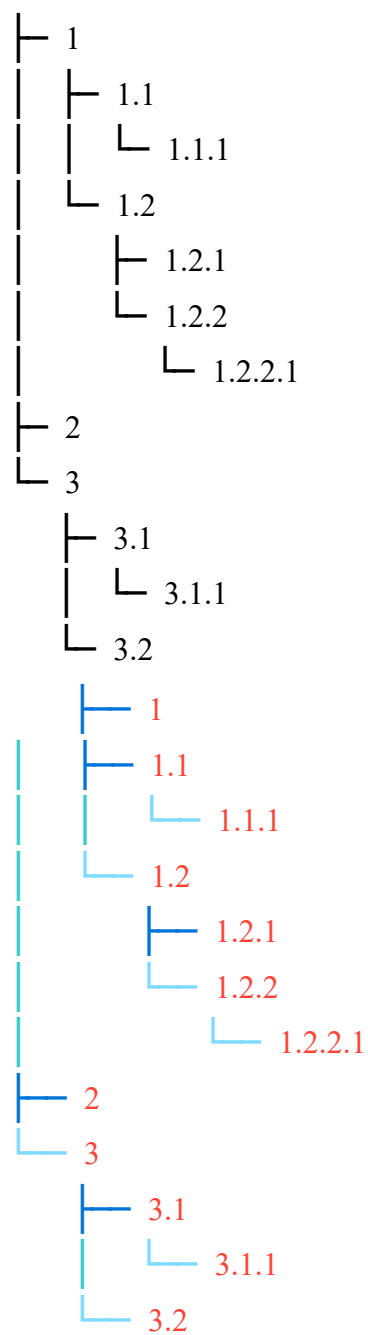
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¹测试脚注



图 1.1.1: 南开大学校徽

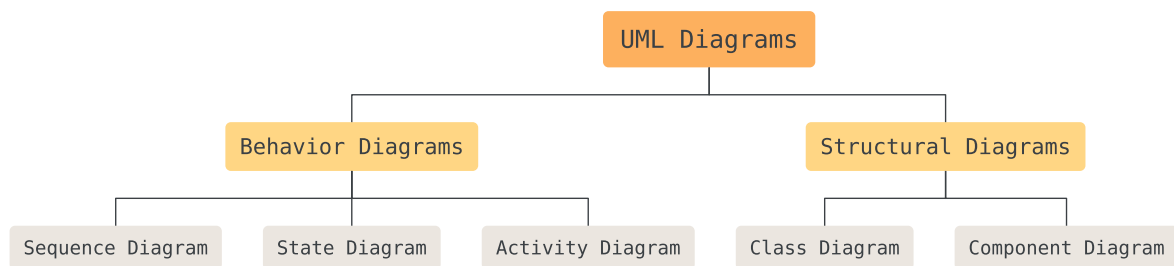
树状图:



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

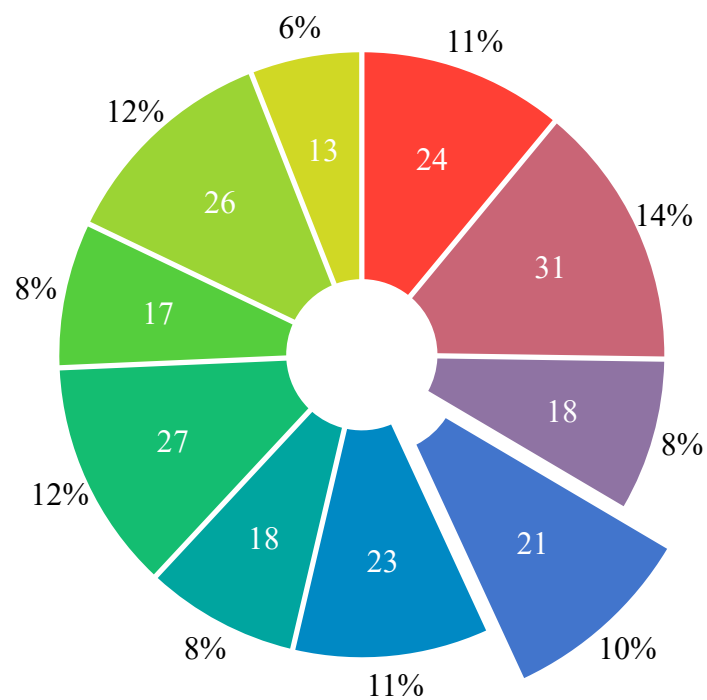


图 1.6.3: 饼图

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

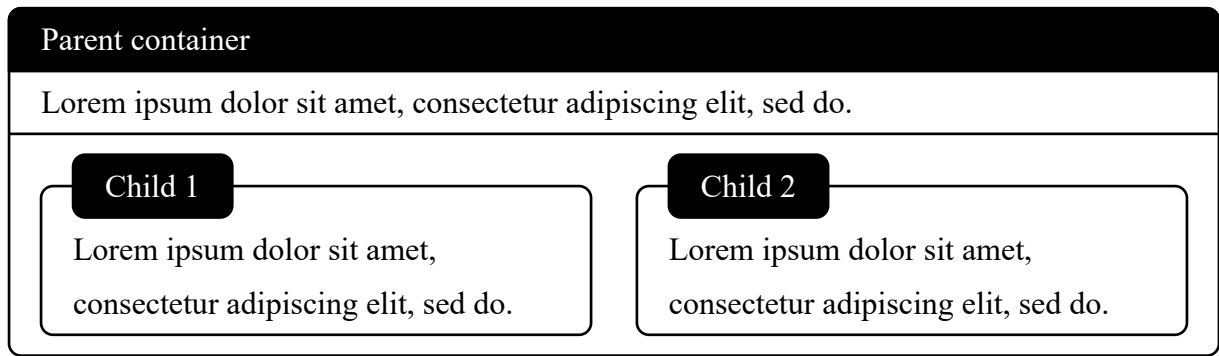
Divergence theorem

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:

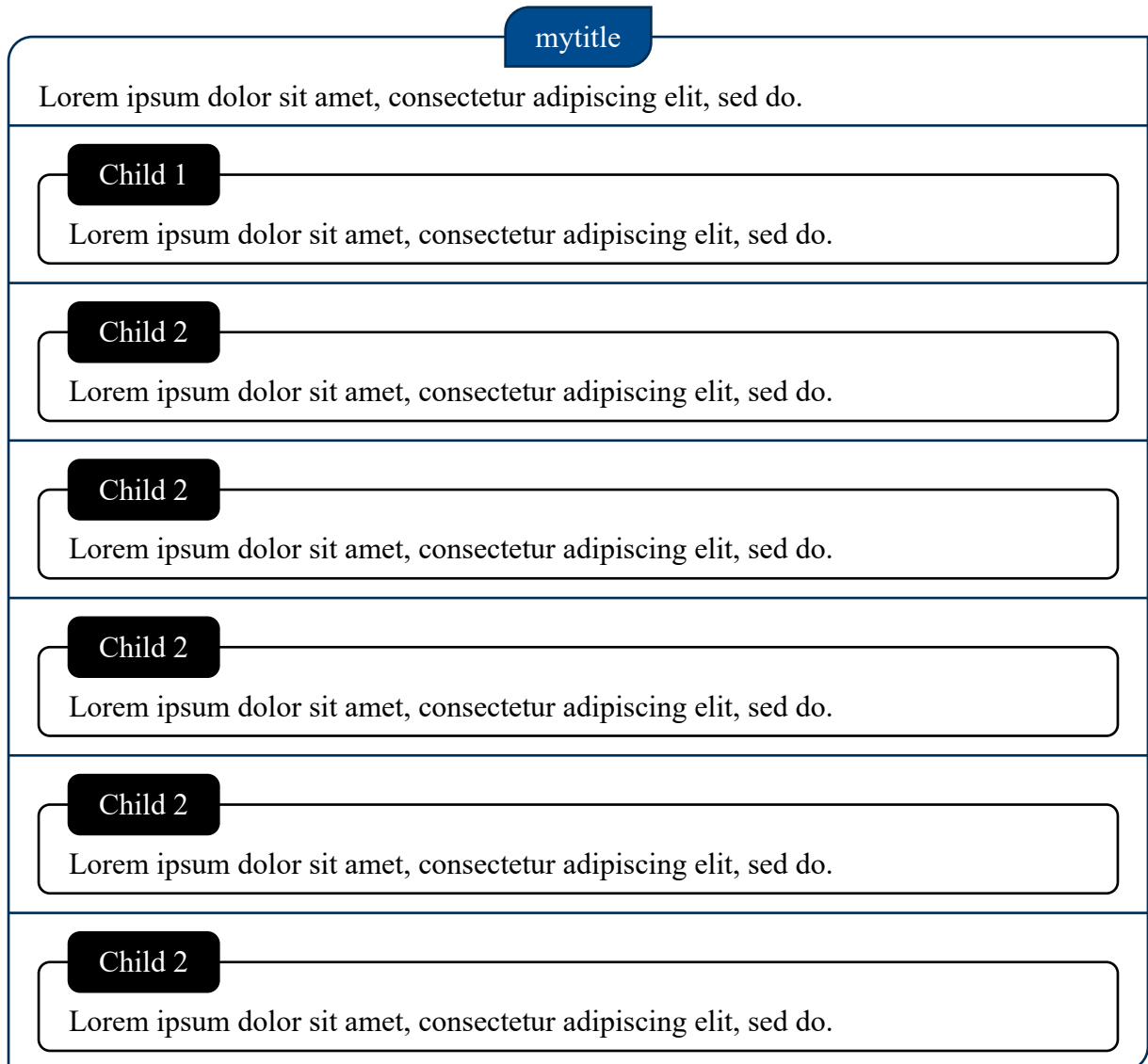
$$\iiint_V (\nabla \cdot \mathbf{F}) \, dV = \iint_S (\mathbf{F} \cdot \hat{\mathbf{n}}) \, dS \quad (1.2)$$

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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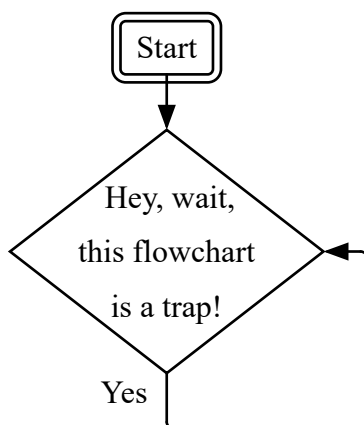
Lorem ipsum dolor.

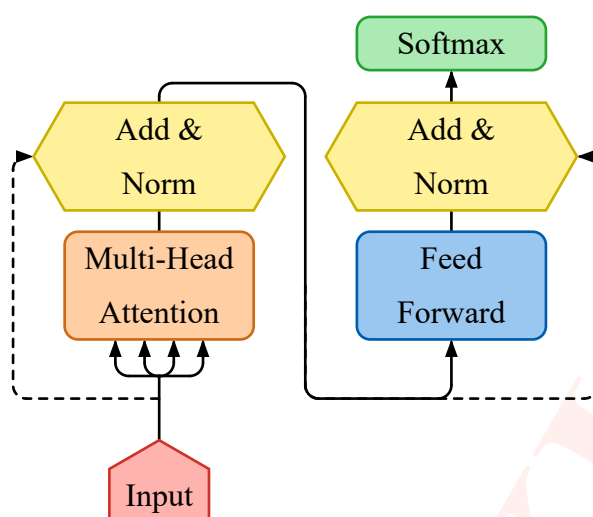
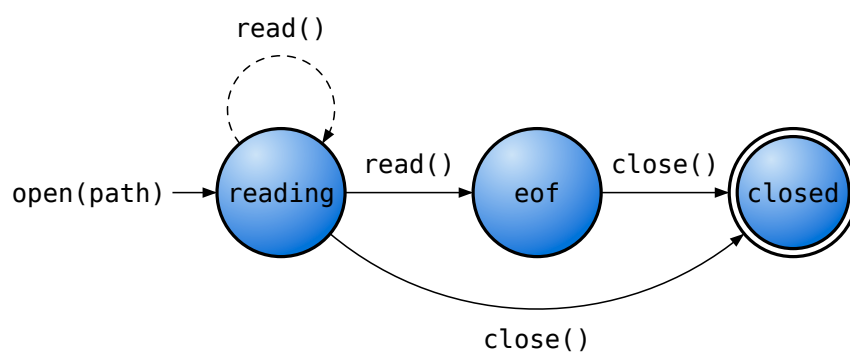
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adipiscing elit, sed do.

Lorem ipsum dolor.

Lorem ipsum dolor sit amet, consectetur
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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

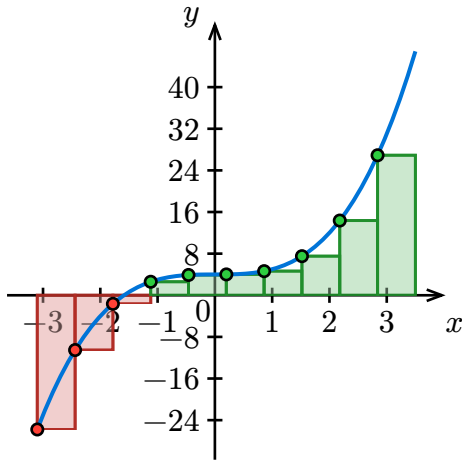
Gray badge
Red badge
Yellow badge

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

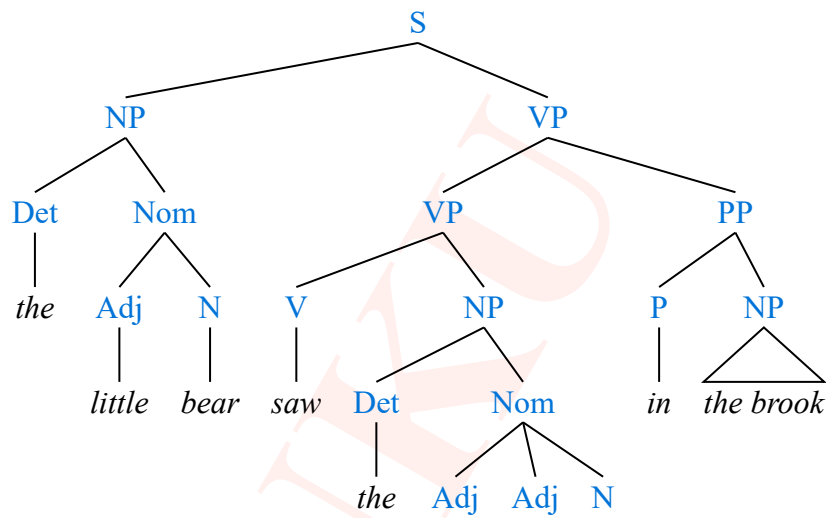


图 1.14.4: Example of a syntax tree.

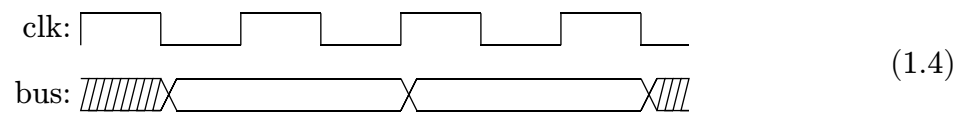
1.15 测试 physica

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

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

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

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



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  $x + y$ 

```

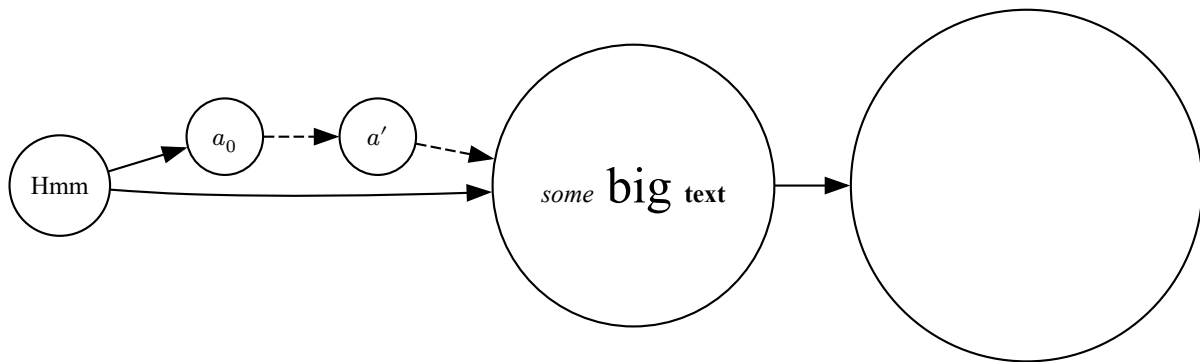
FLOYD-WARSHALL(V, E, w):

```

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).