

Script=CJK,BoldFont=SimHei,ItalicFont=KaiTiSimSun

2019-04-18

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Script=CJK,BoldFont=* BoldMicrosoft YaHei

1

1.1

/ / /

1.2

1.1

IM	Instant Messaging	
RSA	Rives Shamir Adleman	
DES	Data Encryption Standard	
PMI	Privilege Management Infrastructure	
UI	User Interface	
SQL	Structured Query Language	
NoSQL	Not only Structured Query Language	
URL	Uniform Resource Locator	
CPU	Central Processing Unit	
API	Application Programming Interface	
DB	Database	

2

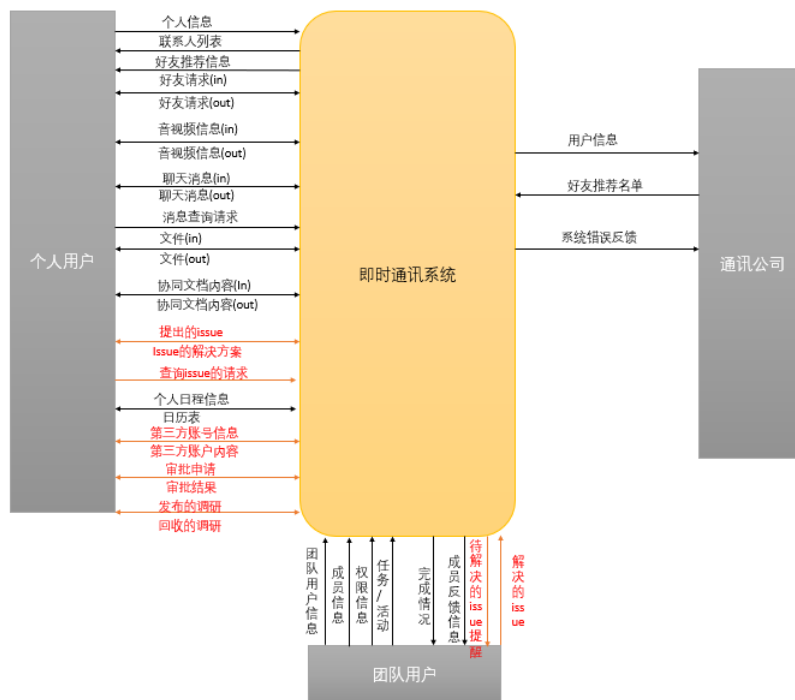
2.1

2.1.1

2.1.2

2.2

-
-
- / Board
- ()
-
-
-
- Board()
-
-
-
-
-
-
-
- (github LinkedIn)
-
-
- ??



2.1

2.3

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2.4

- Android IOS Windows Linux
-

Board

Board

-
-

3

3.1

3.1.1 R.INTF.CALC.001:

3.1.1.1

:

-

-

3.1.1.2

4096

3.1.1.3

-

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-

-

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3.1.1.4

3.1.2 R.INTF.CALC.002:

3.1.2.1 R.INTF.CALC.002.1:

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-
-
- “ ”
- “ ”
- “ ” “ ”
- “ / ” “ ”
- “ ”
- “ ”

3.1.2.2 R.INTF.CALC.002.2:

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4096

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3.1.2.3 R.INTF.CALC.002.3:

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“ ”

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- - GPS
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3.1.2.4 R.INTF.CALC.002.4:

- :
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-
- “ ”
- “ ”
- “ ” “ ”

3.1.3 R.INTF.CALC.003: /

3.1.3.1

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-

3.1.3.2

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-
-

3.1.3.3

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3.1.3.4

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-
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3.1.4 R.INTF.CALC.004: ()

3.1.4.1

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-
-
-

3.1.4.2

“ ” “ ”

“ ” “ ”

“ ”

3.1.4.3

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-
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-
-

3.1.4.4

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3.1.5 R.INTF.CALC.005:

3.1.5.1 R.INTF.CALC.005.1:

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-
-
- “ ”
- “ ” “ ”
- “ ”
- “ ” “ ” “ ”
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-

3.1.5.2 R.INTF.CALC.005.2:

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-
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- “ ”
- “ ” “ ”
- “ ”
- “ ”
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-
-

3.1.5.3 R.INTF.CALC.005.3:

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“ ” “ ” “ ”

-
-

“ ”

3.1.6 R.INTF.CALC.006:

3.1.6.1

:

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- txt xls

3.1.6.2

“ ” “ ” “ ”

3.1.6.3

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-
-

3.1.6.4

-
- 4GB

3.1.7 R.INTF.CALC.007:

3.1.7.1

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3.1.7.2

3.1.7.3

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3.1.7.4

3.1.8 R.INTF.CALC.008: Board()

Board

3.1.8.1

:

- Board

-

- Board

- Board

3.1.8.2

- “Board” Board
- Board “ ” 32MB
- Board “ ” “ ”
- Board Board

3.1.8.3

- Board
- Board

3.1.8.4

-
- Board

3.1.9 R.INTF.CALC.009:

3.1.9.1

:

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-

3.1.9.2

3.1.9.3

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-

3.1.9.4

3.1.10 R.INTF.CALC.010:

3.1.10.1

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-
-
-
-

3.1.10.2

“ ”

4GB

3.1.10.3

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-
-

3.1.10.4

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-
-

3.1.11 R.INTF.CALC.011:

3.1.11.1

:

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3.1.11.2

3.1.11.3

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3.1.11.4

3.1.12 R.INTF.CALC.012:

3.1.12.1

:

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-

3.1.12.2

- “ ”

- 4096

-

3.1.12.3

-

-

-

3.1.12.4

3.1.13 R.INTF.CALC.013:

3.1.13.1

:

-

-

-

-

3.1.13.2

4GB

3.1.13.3

-
-
-

3.1.13.4

-
-
-

3.1.14 R.INTF.CALC.014:

3.1.14.1

:

-
-

3.1.14.2

3.1.14.3

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-

3.1.14.4

3.1.15 R.INTF.CALC.015:

3.1.15.1

:

-
-
-
-

3.1.15.2

- “ ”
- “ ”
- “ ”
- “ ”
- “ ” “ ” “ ”

3.1.15.3

-
-

3.1.15.4

3.1.16 R.INTF.CALC.016:

3.1.16.1

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3.1.16.2

• “ ”

• “ ”

• “ ”

•

• “ ”

3.1.16.3

•

•

3.1.16.4

3.1.17 R.INTF.CALC.017:

3.1.17.1

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-

3.1.17.2

3.1.17.3

-
-

3.1.17.4

3.2

3.2.1

3.2.1.1

- 1 PC 1 - 50

3.2.1.2

- 1000

3.2.1.3

- ≥ 10000 ≥ 1000000 ≥ 1000 ≥ 500000
- ≤ 50 ≤ 20 ≤ 10 ≤ 50
- ≥ 100000 ≥ 10000000 ≥ 10000 ≥ 5000000

-
- ≤ 500 ≤ 200 ≤ 100 ≤ 500

3.2.1.4

- $\leq 4\text{GB}$

3.2.1.5

()

- ≤ 15
- $\geq 10^8$

3.2.1.6

($\geq 10\text{KB/s}$) $\leq 0.30\text{s}$

3.2.1.7

($\geq 10\text{KB/s}$) $\leq 0.15\text{s}$

3.2.1.8

IOS WindowsPC Linux

3.2.1.9

$\leq 256\text{MB}$, $\leq 512\text{MB}$

3.2.2

10s

10s

$\leq 0.1\text{s}$

10000

60s

3.3

3.3.1



3.1 (PC)

3.3.2

3.3.2.1

1. Android 4.0 IOS 6
2. JAVA
3. Eclipse IDE 2019-03

3.3.2.2 PC

1. Windows7 Linux4.1.0 IOS 6
2. JAVA
3. Eclipse IDE 2019-03

3.3.2.3

3.3.3

3.3.3.1

1. MSM800 Exynos5433 HelioX10 A8
2. 512MB

3.3.3.2 PC

1. Intel® Core™ i5
2. 512MB

3.3.4

TCP RFC793 <https://tools.ietf.org/html/rfc793>

4

4.1

GNU General Public License v3.0 :

1. ISO 8601 Data elements and interchange formats -Information interchange - Representation of dates and times
2. GB/T 13702-1992
3. GB/T 19003-2008
4. GB/T 15538-1995
5. GB/T 9385-2008
6. GB/T 18221-2000
7. GB/T 5532-2008
8. GB/T 8567-2006

4.2

4.2.1

1. MSM800 Exynos5433 HelioX10 A8
2. 512MB

4.2.2 PC

1. Intel® Core™ i5
2. 512MB

4.3

Oracle 18.3

- 1.
- 2.

5

5.1

5.2

5.3

5.4

5.5

5.6

5.7

5.8

5.9

5.10

5.11

10KB/s

6

6.1

Unicode JAVA 40%

6.2

:

- 1.
- 2.
- 3.

- 1.
- 2.

6.3

/

6.4

Oracle18.3

6.5

6.5.1

6.5.1.1

- DRAM DRAM
- : Oracle, Hbase

-
- Oracle 12c

6.5.1.2

NoSQL

NoSQL

Oracle18.3

Hbase

6.5.1.3

1. RAID

-
- Block /
-

2.

1000 SRAM, SRAM 1
100,000 1

3.

6.5.1.4

;

;

•

• : ID

6.5.2

4

< < <

< 1000:

<100,000:

>100,000:

6.6

1.

2.

3.

1.

2.

3.

1. Board

2.

3.

4.

5.

-
- 1.
 - 2.
 - 3.
 - 4.

6.7

() ()

7

7.1

ID			
001	(R.INTF.CALC.009)	(R.INTF.CALC.001)	
002	(R.INTF.CALC.009)	(R.INTF.CALC.002)	
003	(R.INTF.CALC.009)	(R.INTF.CALC.005)	
004	(R.INTF.CALC.009)	Borad (R.INTF.CALC.008)	
005	(R.INTF.CALC.001)	(R.INTF.CALC.005)	
006	(R.INTF.CALC.002)	(R.INTF.CALC.005)	
007	(R.INTF.CALC.010)	(R.INTF.CALC.013)	
008	/	Borad	/
	(R.INTF.CALC.003)	(R.INTF.CALC.008)	
009	/		/
	(R.INTF.CALC.003)	(R.INTF.CALC.002)	
010	(R.INTF.CALC.014)		
011	(R.INTF.CALC.015)	(R.INTF.CALC.005)	

7.2 ()

ID			
012	(R.INTF.CALC.015)	(R.INTF.CALC.007)	
013	(R.INTF.CALC.015)	(R.INTF.CALC.011)	
014	(R.INTF.CALC.016)	Borad (R.INTF.CALC.008)	
015	(R.INTF.CALC.016)	(R.INTF.CALC.002)	
016	(R.INTF.CALC.016)	(R.INTF.CALC.005)	
017	(R.INTF.CALC.017)	(R.INTF.CALC.007)	
018	(R.INTF.CALC.017)	(R.INTF.CALC.011)	

8

8.1

ID		
R.INTF.CALC.001		
R.INTF.CALC.002		
R.INTF.CALC.003	/	
R.INTF.CALC.004	()	
R.INTF.CALC.005		
R.INTF.CALC.006		
R.INTF.CALC.007		
R.INTF.CALC.008	Board()	
R.INTF.CALC.009		
R.INTF.CALC.010		
R.INTF.CALC.011		
R.INTF.CALC.012		
R.INTF.CALC.013		
R.INTF.CALC.014		
R.INTF.CALC.015		
R.INTF.CALC.016		
R.INTF.CALC.017		

•

•

•

9

9.1

ID		(H/M/L)				(Open/- Close)
R.INTF.CALC.001		H			–	Open
R.INTF.CALC.004		M			–	Open
R.INTF.CALC.010		M			–	Open
R.INTF.CALC.013		M			–	Open
R.INTF.CALC.017		L			–	Open

A

A.1

IOS Windows

Linux Intel JAVA Eclipse

A.2

,

A.3

•

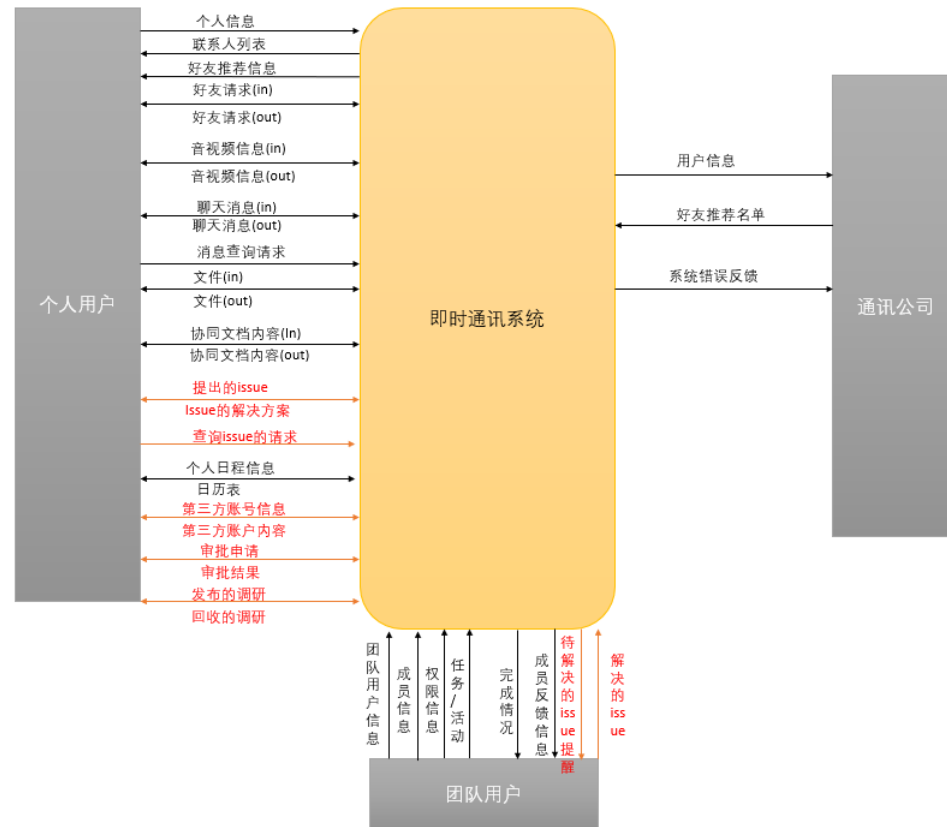
•

A.4

B

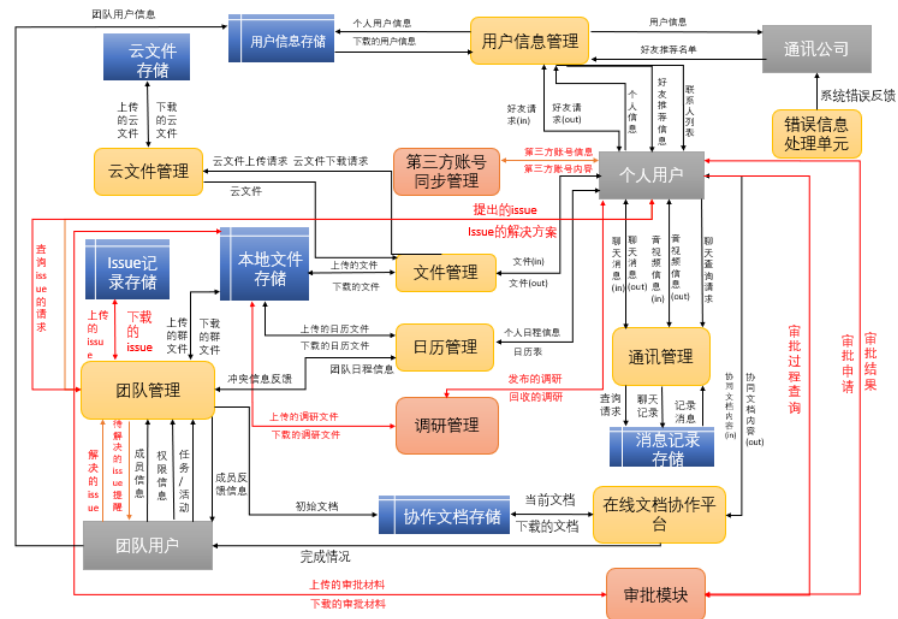
B.1

B.1.1



B.1

B.1.2 0



B.2 0

B.2

B.2.1

B.2.1.1

-
-
- $= + +$
- $= \{0\dots9\}$
 $= \{\text{char}\}$
 $=$

B.2.1.2

-
-
- $= [\quad]$
- $= \{0\dots9\}$
 $= \{\text{char}\}$

B.2.1.3

-
-
- $= + +$

-
- = {0...9}
= {char}
= {char}

B.2.1.4

-
-
- = + +
- = {0...9}
= {0...9}
= {char}

B.2.1.5

-
-
- = + +
- = {0...9}
= {0...9}
=

B.2.1.6 issue

-

-
- - $\text{issue} = \text{ } + \text{ } + \text{issue}$
 -
 - $\text{ } = \{0 \dots 9\}$
 - $\text{ } = \text{time}$
 - $\text{issue} = \{\text{char}\}$

B.2.1.7 issue

-
-
- $\text{issue} = \text{ } + [\text{issue} \mid \text{issue}]$
-
- $\text{ } = \{0 \dots 9\}$
- $\text{issue} = \{0 \dots 9\}$
- $\text{issue} = \{\text{char}\}$

B.2.1.8 issue

-
-
- $\text{issue} = \text{issue} + \text{issue} +$
-
- $\text{issue} = \{0 \dots 9\}$
- $\text{issue} = \{\text{char}\}$
- $\text{ } = \{\text{char}\}$

B.2.1.9

-
-
- $\quad = \quad + \quad + \quad + \quad +$
- - $= \{\text{char}\}$
 - $= [\text{”} \quad \text{”} \mid \text{”} \quad \text{”}]$
 - $= \{ \quad \}$
 - $= \{0\dots 9\}$
 - $=$
 - $= \text{time}$

B.2.1.10

-
-
- $\quad = \quad +$
- - $= \{\text{char}\}$
 - $=$

B.2.1.11

-
-
- $\quad = \quad + \quad +$

$$\begin{aligned}
 & \bullet \\
 & = \{0 \dots 9\} \\
 & = \{0 \dots 9\} \\
 & =
 \end{aligned}$$

B.2.1.12

$$\begin{aligned}
 & \bullet \\
 & \bullet \\
 & \bullet = + + \\
 & \bullet \\
 & = \{0 \dots 9\} \\
 & = \{0 \dots 9\} \\
 & =
 \end{aligned}$$

B.2.1.13

$$\begin{aligned}
 & \bullet \\
 & \bullet \\
 & \bullet = + + + \{ \} \\
 & \bullet \\
 & = \{0 \dots 9\} \\
 & = \{0 \dots 9\} \\
 & = \{0 \dots 9\} \\
 & =
 \end{aligned}$$

B.2.1.14

$$\bullet$$

-
- - $\text{issue} = \text{issue} + \text{issue} + \{ \}$
 - - $\text{issue} = \{0\dots9\}$
 - $\text{issue} = \{0\dots9\}$
 - $\text{issue} = \{0\dots9\}$
 - $\text{issue} =$

B.2.1.15 `issue`

-
-
- $\text{issue} = \{\text{issue} + \text{issue} \}$
- - $\text{issue} = \{0\dots9\}$
 - $\text{issue} = \{\text{char}\}$

B.2.1.16 `issue`

-
-
- $\text{issue} = \text{issue} + \text{issue}$
- - $\text{issue} = \{0\dots9\}$
 - $\text{issue} = \{\text{char}\}$

B.2.1.17 (out)

-
-
- (out) = [(out) | (out) | |]
-

B.2.1.18 (in)

-
-
- (in) = [(in) | (in) | |]
-

B.2.1.19 (out)

-
-
- (out) = [| | |]
- {char}

B.2.1.20 (in)

-

-
- - $(in) = [\quad | \quad]$
 -
 - char

B.2.1.21 (out)

-
-
- $(out) = \quad + \{\text{char image}\} +$
-
- $= \{0...9\}$
- $= \text{time}$

B.2.1.22 (in)

-
-
- $(in) = \quad + \{\text{char image}\} +$
-
- $= \{0...9\}$
- $= \text{time}$

B.2.1.23

-
-
- $= \quad + \quad +$

-
- $= \{0 \dots 9\}$
 $= [\text{time} \mid \{\text{char}\}]$

B.2.1.24 (out)

-
-
- $(\text{out}) = \quad + \quad +$
- $= \{0 \dots 9\}$
 $=$
 $= \text{time}$

B.2.1.25 (in)

-
-
- $(\text{out}) = \quad + \quad +$
- $= \{0 \dots 9\}$
 $=$
 $= \text{time}$

B.2.1.26 (out)

-
-

- $(out) = \quad + \quad + \quad +$

- $= \{0...9\}$
 $= \{\text{char}, \text{image}\}$
 $= \text{time}$
 $= \{\text{char}\}$

B.2.1.27 (in)

-
-
- $(out) =$
- $= \{\text{char image}\}$

B.2.1.28

-
-
- $= \quad +$
- $= \{0...9\}$
 $= [\quad | \quad | \quad | \quad | \quad]$

B.2.1.29

-
-

- $\quad = \quad +$

- $\quad = \{0\dots 9\}$
 $\quad = \{ \quad + \quad \}$

B.2.1.30

-
-
- $\quad = \{ \quad + \quad \}$
- $\quad = \text{time}$
 $\quad = \{\text{char}\}$

B.2.1.31

-
-
- $\quad = \quad +$
- $\quad = \{0\dots 9\}$
 $\quad =$

B.2.1.32

-
-

- $\text{ } = \{ \text{ } \}$

- $\text{ } =$

B.2.1.33 /

-
-
- $/ = \{ + [\mid] + \}$
-

$$=$$

$$= \{\text{char}, \text{image}\}$$

$$= \{\text{char}, \text{image}\}$$

$$= \text{time}$$

B.2.1.34

-
-
- $=$

$$= [\mid]$$

$$= \{ \}$$

-

$$= \{0\dots9\}$$

B.2.1.35

-
-
- $= \{ \quad + \quad \}$
- $= \{0\dots9\}$
 $= \{\text{char}\}$

B.2.1.36

-
-
- $= \quad + \{ \quad + \quad \}$
- $= \text{time}$
 $= \{0\dots9\}$
 $= \text{float}$

B.2.1.37

-
-
- $= \{ \quad + \quad + \quad \}$
- $= \{0\dots9\}$
 $= \{\text{char}, \text{image}\}$

= time

B.2.1.38

-
-
- - = { + + }
 - = { + }
 - = { + + + }
- - = {0...9}
 - = {char}
 - = {char}
 - = {char}
 - = time
 - = time

B.2.1.39

-
-
- - = { }
- - =

B.2.1.40

-
-

- $= \{ \quad \}$

- $=$

B.2.1.41

-

-

- $= \{ \quad + \quad + \quad \}$

-

$$= \{\text{char}\}$$

$$= \text{time}$$

$$= \{\text{char}\}$$

B.2.1.42

-

-

- $= \{ \quad + \quad \}$

-

$$= \{0\dots9\}$$

$$=$$

B.2.1.43

-

-

- $= \{ \quad + \quad \}$

-
- = {0...9}
=

B.2.1.44

-
-
- = { + + }
- = {0...9}
= {char}
=

B.2.1.45

-
-
- = { + + }
- = {0...9}
= {char}
=

B.2.1.46

-
-

- $= \{ \quad + \quad \}$

- $= \{0\dots9\}$
 $=$

B.2.1.47

-
-
- $= \{ \quad + \quad \}$
- $= \{0\dots9\}$
 $=$

B.2.1.48

-
-
- $= \{ \quad + \quad + \quad \}$
- $= \{0\dots9\}$
 $=$

B.2.1.49

-
-

- $= + \{ + \}$

- $= \{0...9\}$
 $= \text{time}$
 $= \{\text{char}\}$

B.2.1.50

-
-
- $= \{ + \}$
- $= \{0...9\}$
 $=$

B.2.1.51

-
-
- $= \{ + + \}$
- $= \{0...9\}$
 $=$

B.2.1.52

-
-

- $= + \{ + \}$

-

$$= \{0\dots9\}$$

$$= \text{time}$$

$$= \{\text{char}\}$$

B.2.1.53

-

-

- $= + \{ + \}$

-

$$= \{0\dots9\}$$

$$= \text{time}$$

$$= \{\text{char}\}$$

B.2.1.54

-

-

- $= + +$

-

$$= \{0\dots9\}$$

$$= \text{time}$$

$$= \{\text{char}\}$$

B.2.1.55

-
-
- = + + +
- = {0...9}
= time
= {[char, image]}

B.2.1.56

-
-
- = + + ()
- = {0...9}
= {char}

B.2.1.57

-
-
- = + + +
- = {0...9}
= time

$$= \{\text{char}, \text{image}\}$$

B.2.1.58

-
-
- $= +$
-
- $= \{\text{char}, \text{image}\}$
- $= \text{time}$

B.2.1.59

-
-
- $= +$
-
- $= \{\text{char}, \text{image}\}$
- $= \text{time}$

B.2.1.60

-
-
- $= \{ \quad + \quad \}$
-
- $= \{0\dots9\}$

= {char}

B.2.2

B.2.2.1 issue

- issue
- D0
- issue
- issue
- issue +issue +issue +issue

B.2.2.2

-
- D1
- [,]
- [,]
- +
+
+
+()+ +

B.2.2.3

-
- D2

- $\left[\begin{array}{c} \\ \end{array} \right]$

- $\left[\begin{array}{c} \\ \end{array} \right]$

- $\begin{array}{c} \\ \end{array} +$

$$+$$

$$+$$

$$+()+ +$$

B.2.2.4

-

- D3

- $\left[\begin{array}{c} \\ \end{array} \right]$

-

- $\begin{array}{c} \\ \end{array} + +$

$$+ + +$$

B.2.2.5

-

- D4

- $\left[\begin{array}{c} \\ \end{array} \right]$

- $\left[\begin{array}{c} \\ \end{array} \right]$

-

$$+[] + + + +$$

B.2.3

B.2.3.1

```
Script=CJKFangSong
1 IF (
2     API
3
4
5
```

```

1 IF (
2     API
3
4
5

```

B.2.3.2

-
- []
 -
 -

B.2

```

1 IF( )
2
3
4
5
6 ELSE IF( )
7
8
9

```

B.2.3.3

-
- : []
- []
-
-

B.3

```

1 IF( )
2
3
4
5
6 ELSE IF( )
7
8     IF( )
9     ELSE “ ”
10
11 ELSE IF( )
12
13
14     IF( )

```

B.2.3.4

-
- [(in),]
- [(out),]
-
-

B.4

```
1 IF ( ) :
2
3
4
5
6 IF ( )
7
8 ELSE
9
10
11
12 IF ( ) :
13
14
15     IF ( )
16
17     ELSE IF ( )
18
19
20     ELSE
21
22
23
```

B.2.3.5

-
- []
-
-

-
- :

B.5

1	IF () :
2	
3	
4	IF () :
5	
6	
7	

B.2.3.6

-
- []
- []
-
- :

B.6

1	IF ()
2	
3	IF ()
4	
5	ELSE:
6	
7	
8	
9	ELSE ()
10	FOR (in)
11	
12	
13	IF ()
14	
15	
16	
17	FOR (in)
18	
19	
20	

B.2.3.7

-
- []
- []
-
- :

B.7

```
1 IF ( )
2   IF ( )
3
4
5   ELSE IF ( )
6
7
8   ELSE IF ( )
9
10
11  ELSE IF ( )
12
13
14 IF ( )
15
16
17 IF ( )
18
19 IF ( )
20
21
22 IF ( )
23
24
25
26 IF ( )
27
```

B.2.3.8

-
- [(out) (out)]

-
- [(in) (in)]
 -
 - :

B.8

```

1 IF(
2     IF(
3
4     ELSE
5
6
7 ELSE IF(
8
9     IF(
10
11 ELSE IF(
12
13
14 ELSE IF(
15
```

B.2.3.9

-
- [(out)]
- [(in)]
-
- :

B.9

```

1 IF(
2     IF(
3
4     ELSE
5
6 ELSE IF(
7
8 ELSE IF(
9
```

```

10
11 ELSE IF(      )
12
13

```

B.2.3.10

-
- [(out)]
- [(in)]
- /
- :

B.10

```

1 IF(      )
2
3 ELSE IF(      )
4
5
6
7
8 ELSE IF(      )
9
10
11
12
13 ELSE IF(      )
14
15
16
17

```

B.2.3.11

-
-
-
-

•

B.11

1	IF ()
2		
3		
4		