2023064128

2023064129

SRS

1

1.1

Smart Note

-
-
-
-

1.2

Smart Note

Markdown

1.3

SRS	Software Requirements Specification
Markdown	
WYSIWYG	What You See Is What You Get
MIME	Multipurpose Internet Mail Extensions
UI	User Interface
API	Application Programming Interface
SQLite	
ContentProvider	Android

1.4

1. IEEE Std 830-1998, IEEE Recommended Practice for Software Requirements Specifications

2. GB/T 9385-2008

3. (MiCode Notes) https://github.com/MiCode/Notes

4. Android　https://developer.android.com/

5. Markdown　https://commonmark.org/

2

2.1

Markdown

2.2

2.2.1

1.

2.

3.

4.　　Google Tasks

5.

6.

7.

2.2.2

1. **Markdown**　　　Markdown　　　/

2.　　　　Markdown　HTML

2.3

-

-

-

-

2.4

- ARMv7

- 512MB RAM

- 50MB

- 480×800

- Android 4.0 API Level 14

- SQLite 3.0

- Android Support Library Markwon Markdown

## 2.5

- Java

- Android 4.0

- Android

-

- 20MB

- Google Play Services

- Android

- Markdown　　　　Markdown

-

3

3.1

3.1.1
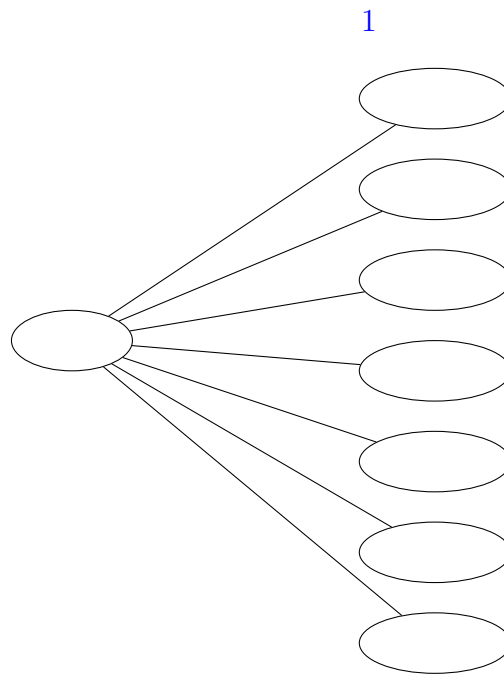
1:
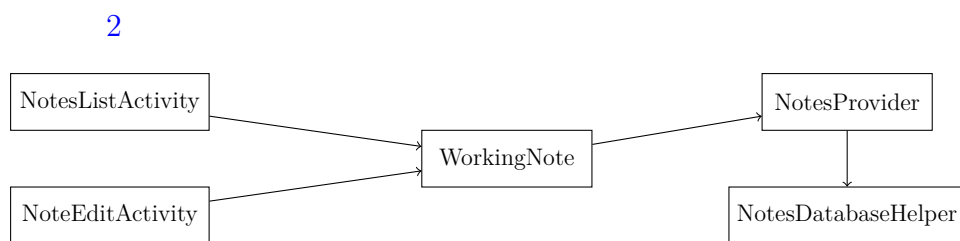
2:

3.1.2   1 Markdown

Markdown   Markdown

- Markdown

-

-
- Markdown
-

  1. Markdown
  2. " "
  3. Markdown
  4.
  5. " "
  6.
  7. Markdown

-

  3a. Markdown

3 Markdown

Markdown

«include»
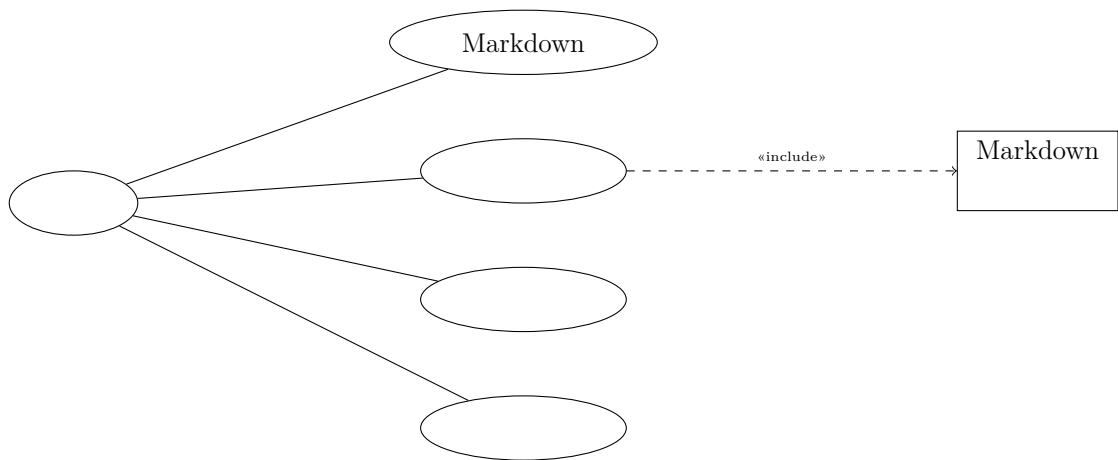
Markdown

3: Markdown

4 Markdown
5 Markdown
6
7 Markdown

- Markdown 500ms 10000
- 200ms

Markdown

Markdown

?

Markdown

?
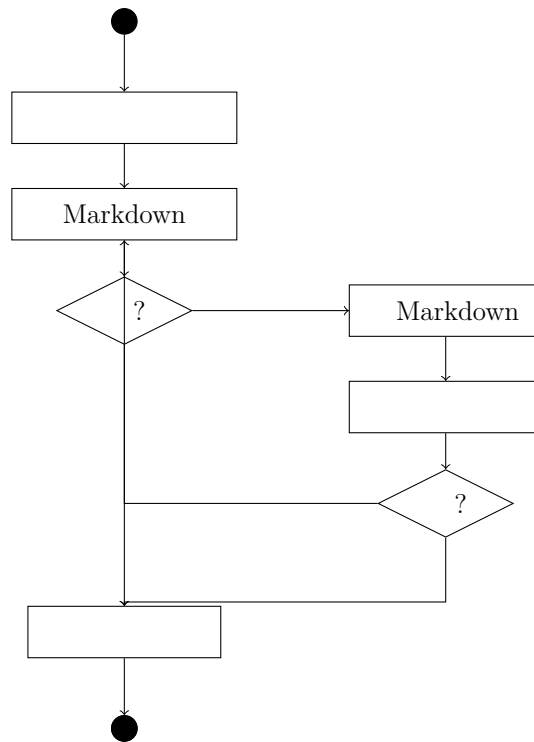
4: Markdown

- Markdown data content

- MIME_TYPE "text/note"

- HTML

3.1.3 2

Markdown HTML Android

-
-
-
-
-

1.

NoteEditActivity　　　EditText　　　MarkdownRenderer　　　TextView

getText()

render(text)

setText(html)

setVisibility(GONE)

setVisibility(VISIBLE)

EditText
TextView

图 5: Markdown

EditText　　　TextView
Markdown
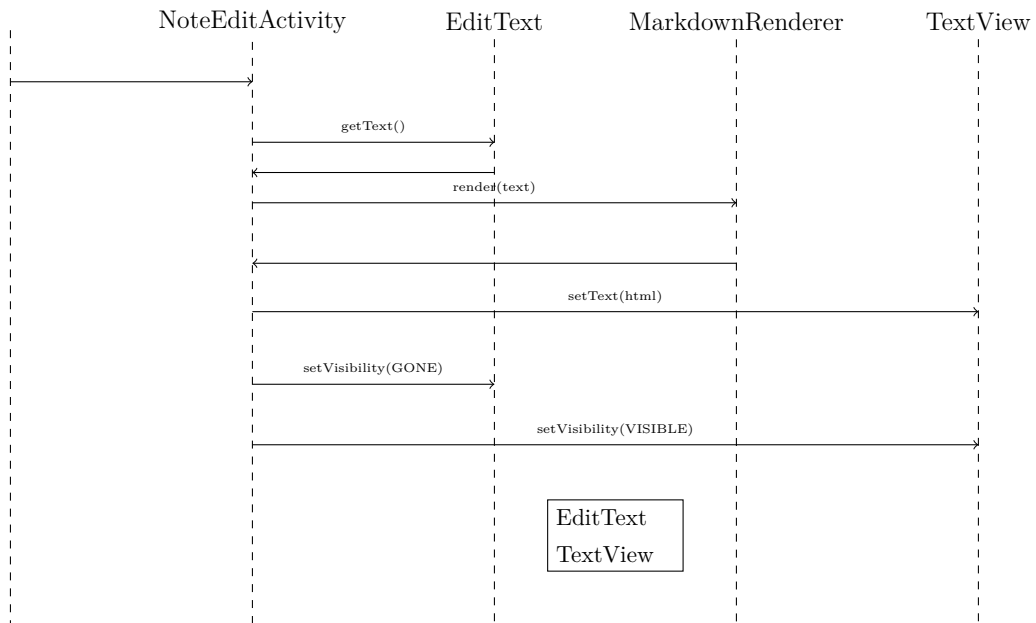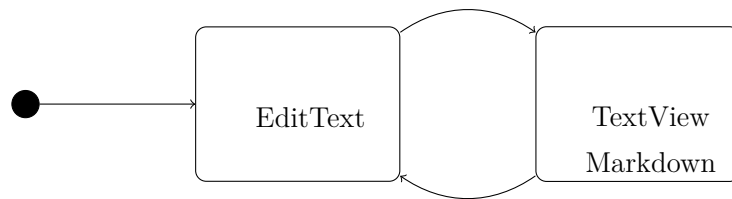
图 6:

2. 　　　/Markdown/HTML

3.

4.

5. 　Android　Intent

6.

7.

-

4a. 　HTML　Markdown　HTML　CSS

6a.

```
┌─────────────────────────────┐
│ NoteEditActivity            │
├─────────────────────────────┤
│ -mNoteEditor: EditText      │
│ -mPreviewView: TextView     │
│ -mPreviewButton: Button     │
│ -mIsPreviewMode: boolean    │
├─────────────────────────────┤
│ +togglePreview(): void      │
│ +renderMarkdown(): void     │
│ +switchToEditMode(): void   │
│ +switchToPreviewMode(): void│
└─────────────────────────────┘
```

```
┌──────────────────────────────────────┐
│ MarkdownRenderer                       │
├──────────────────────────────────────┤
│ -markwon: Markwon                      │
│ -context: Context                      │
├──────────────────────────────────────┤
│ +render(text: String): Spanned         │
│ +initialize(context: Context): void    │
│ +setTheme(theme: Theme): void           │
└──────────────────────────────────────┘
```

7: Markdown

8:
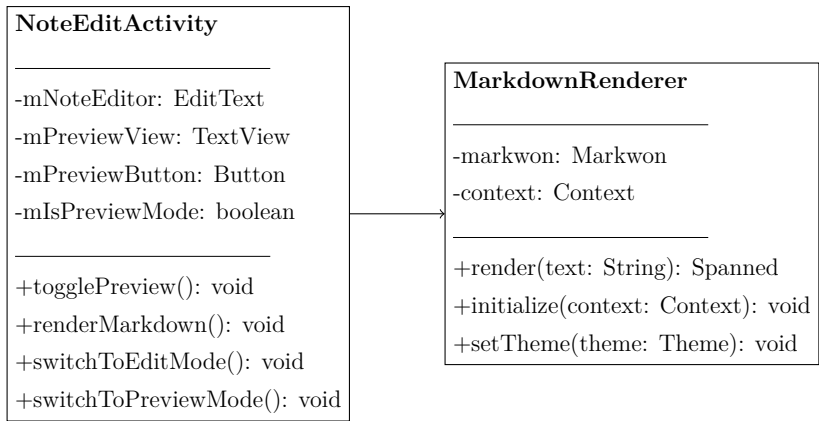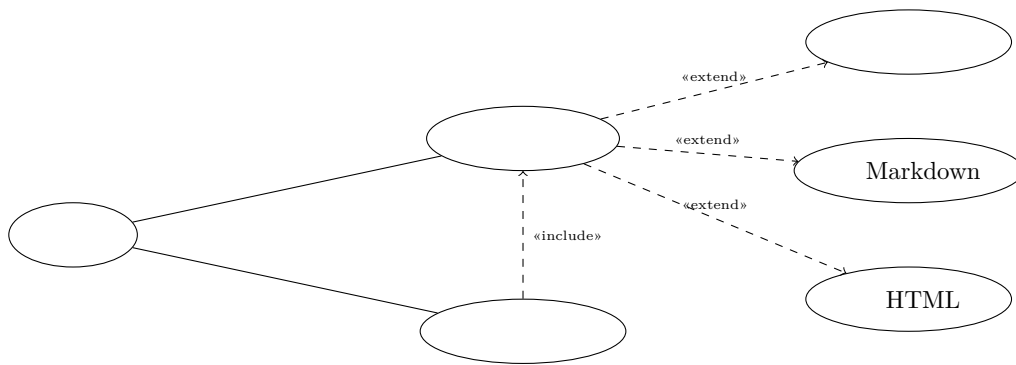
- 　　　　1

- HTML 　　　 CSS

- 　　

- 　　HTML 　HTML5

- Markdown 　　CommonMark

3.2

3.2.1

- 　

  - 　　1
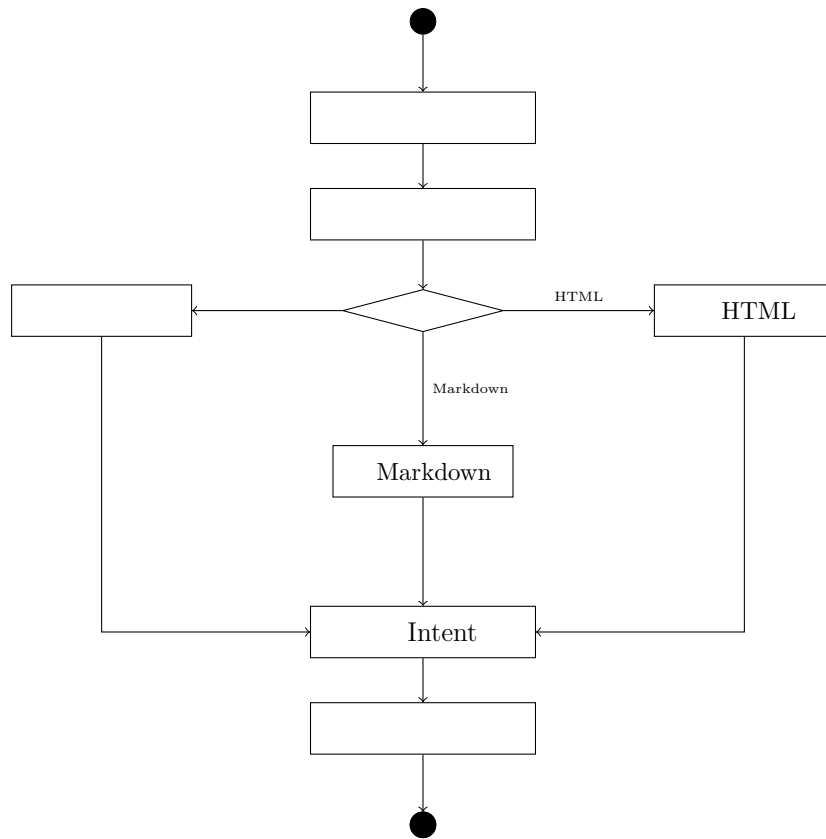
9:

- – 1
- – 500ms
- – Markdown 500ms
- – 1

-

  –
  –
  – APK

-

-

3.2.2

- 99.9%

-

NoteEditActivity FormatDialog FormatConverter ShareIntent

show()

HTML

onFormatSelected(HTML)

convertToHtml(text)

HTML

createIntent(html)

Intent

startActivity(intent)
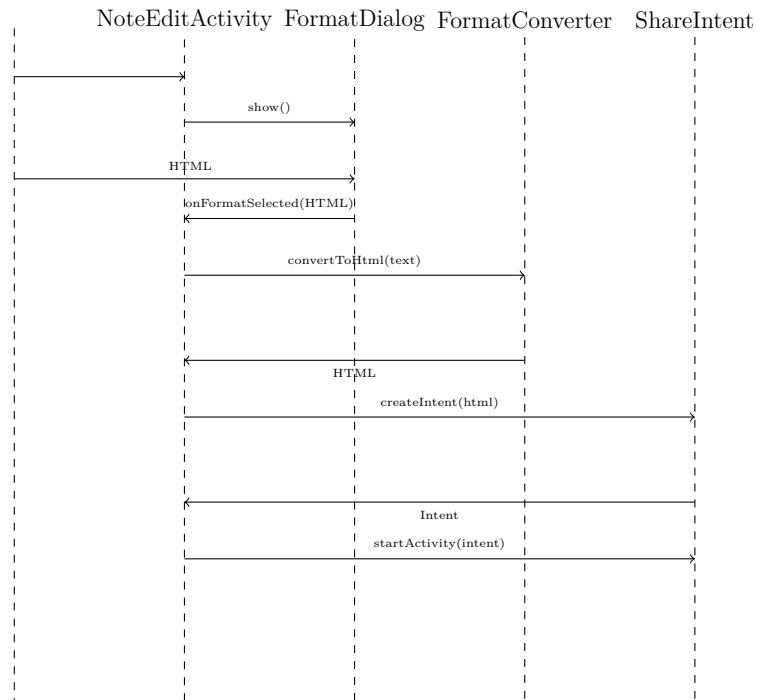
10:　　HTML

- NotesProvider

-

-

•

- Markdown

-

-

3.2.3

•

- Android

-

-

•

- ContentProvider

- Markdown

FormatConverter
——————————————

——————————————
+convertToPlainText(text: String): String
+convertToMarkdown(text: String): String
+convertToHtml(text: String): String
+addCssStyles(html: String): String

FormatDialog
——————————————
-listener: OnFormatSelectedListener
-formats: List<Format>
——————————————
+show(): void
+onFormatSelected(format: Format): void
+dismiss(): void

ShareHelper
——————————————
-context: Context
——————————————
+shareContent(content: String, type: String): void
+createShareIntent(content: String): Intent
+getMimeType(format: Format): String

11:

– PDF

•

– UI

–

3.2.4

•

–

– HTTPS

– Android KeyStore

•

–

–

3.2.5

• Android 4.0   API Level 14+

•

•

• Material Design   Android

3.2.6

- 　　
  - －
  - －
  - －

- 　　
  - － Android　UI
  - －
  - －

- 　　
  - －
  - －
  - －

4 　

4.1 　

　　SQLite 　

4.1.1 　note 　

_id	INTEGER	PRIMARY KEY	
type	INTEGER	NOT NULL	/
created_date	INTEGER	NOT NULL	Unix
modified_date	INTEGER	NOT NULL	Unix

14

sync_id	INTEGER		ID
parent_id	INTEGER		ID
alerted_date	INTEGER		

4.1.2 data

_id	INTEGER	PRIMARY KEY	
mime_type	TEXT	NOT NULL	text/note
note_id	INTEGER	NOT NULL	ID
content	TEXT	NOT NULL	Markdown
data1	INTEGER		1
data2	INTEGER		2
data3	TEXT		3

4.2

5

5.1

5.1.1

-
-
-
-

```
        ┌─────────────┐
        │  UI Layer   │
        └─────────────┘
               ↕ /
        ┌─────────────┐
        │ WorkingNote │
        └─────────────┘
               ↕ CRUD
        ┌──────────────┐          ┌──────────────┐
        │ NotesProvider│ ◄──────► │ Google Tasks │
        └──────────────┘          └──────────────┘
               ↕ SQL
        ┌─────────────┐
        │   SQLite    │
        └─────────────┘
```
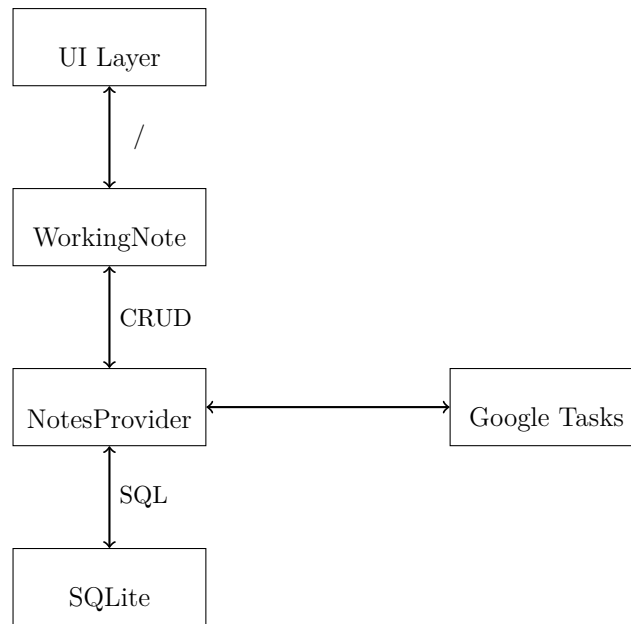
12:

5.1.2

- EditText

- TextView

-
    - /
    -
    -
    -

- Markdown

5.1.3

- Markdown HTML

-

-

16

5.2

5.2.1 Android

- **AlarmManager**

- **ContentProvider**

- **Intent** Activity

- **AccountManager**

5.2.2

- **Markwon** Markdown

  - Markwon.create(context): Markwon

  - markwon.setMarkdown(textView, markdown): void

5.3

- WiFi

-

-

6

6.1

- 5

- Markdown

-

6.2

- MTBF 100

- 0.01%

- 99%

6.3

- 2

- 100MB

-

6.4

-

-

-

7

7.1

7.1.1 Markdown

- **AC-001** Markdown

- **AC-002** 200ms

- **AC-003** Markdown

- **AC-004** 10000 Markdown

- **AC-005** Markdown

7.1.2

- **AC-006**

- **AC-007**

- **AC-008** Markdown

- **AC-009** HTML CSS

- **AC-010** Intent

18

7.1.3

- **AC-011**
- **AC-012**

7.2

- **PC-001** < 1 Android
- **PC-002** Markdown < 500ms 10000
- **PC-003** < 1
- **PC-004**
- **PC-005** APK

7.3

- **CC-001** Android 4.0
- **CC-002**
- **CC-003**

7.4

- **SC-001**
- **SC-002** HTTPS
- **SC-003**

7.5

- WorkingNote FormatConverter MarkdownRenderer
- UI
-
- Android Profiler
- Android
- **UAT**

8

8.1

	WorkingNote
	Markdown
MIME	"text/note"
	Google Tasks
	Acceptance Criteria

8.2

MVC Model-View-Controller

- **Model** WorkingNote Note

- **View** NotesListActivity NoteEditActivity　UI

- **Controller** Activity

Android

- ContentProvider

- AsyncQueryHandler

- Cursor