

# M-BOX

Group 7

COACH : Adrian

TEAM MEMBERS: Man Changhai, Samuel Bedeau, Xu zhi,  
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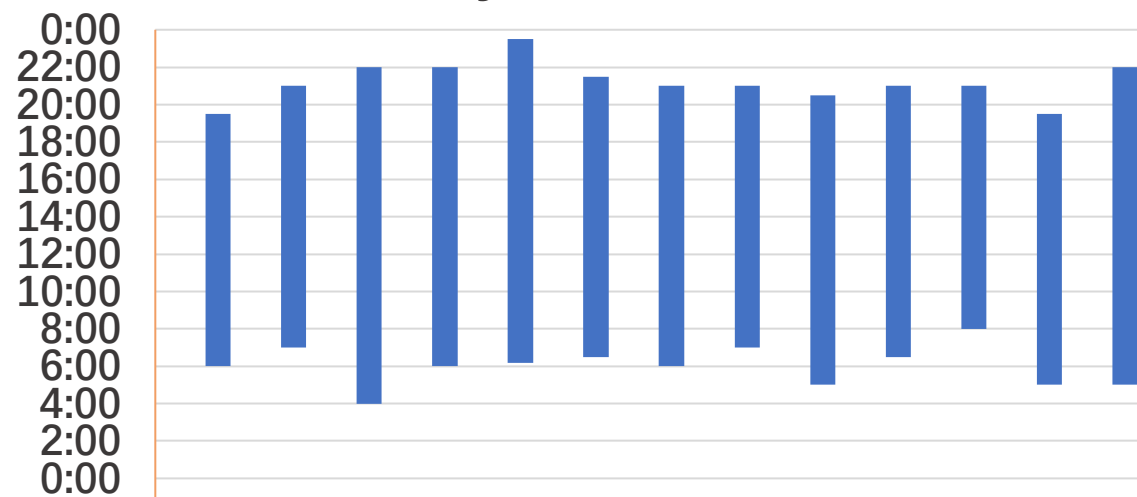


08/02/2019

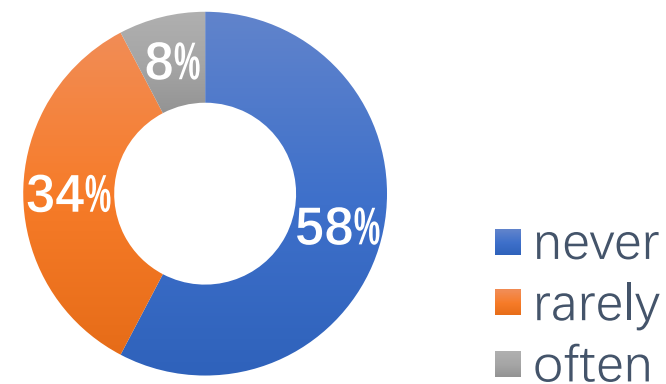
1/7

elderly people died from  
irrational drug using

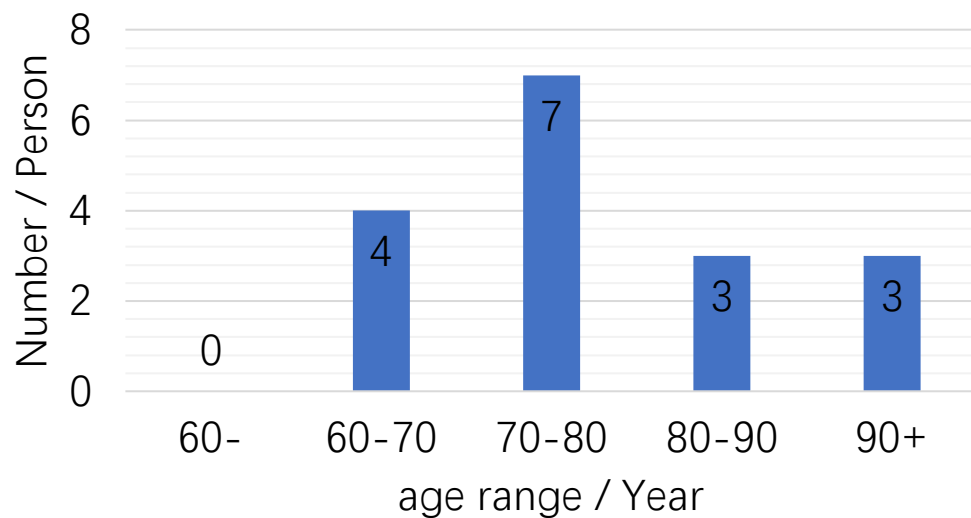
### The activity time of old men



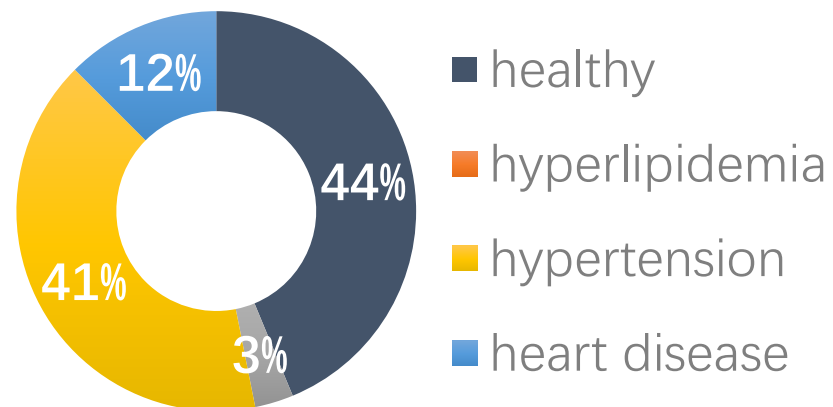
### Forgetfulness



### Age distribution



### Health condition



IDEATION

CONCEPT

PRODUCT



USE WHAT YOU LEARNT

A **Modular** Pill Box that Reminds  
You **When** and **How Much Medicine** to Take

LIGHT– Plastic/Alufer/Carbon fiber

SMALL– Dimension

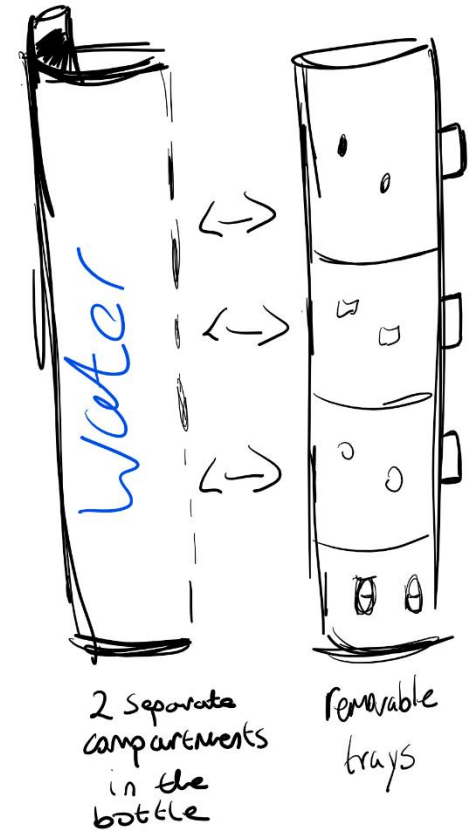
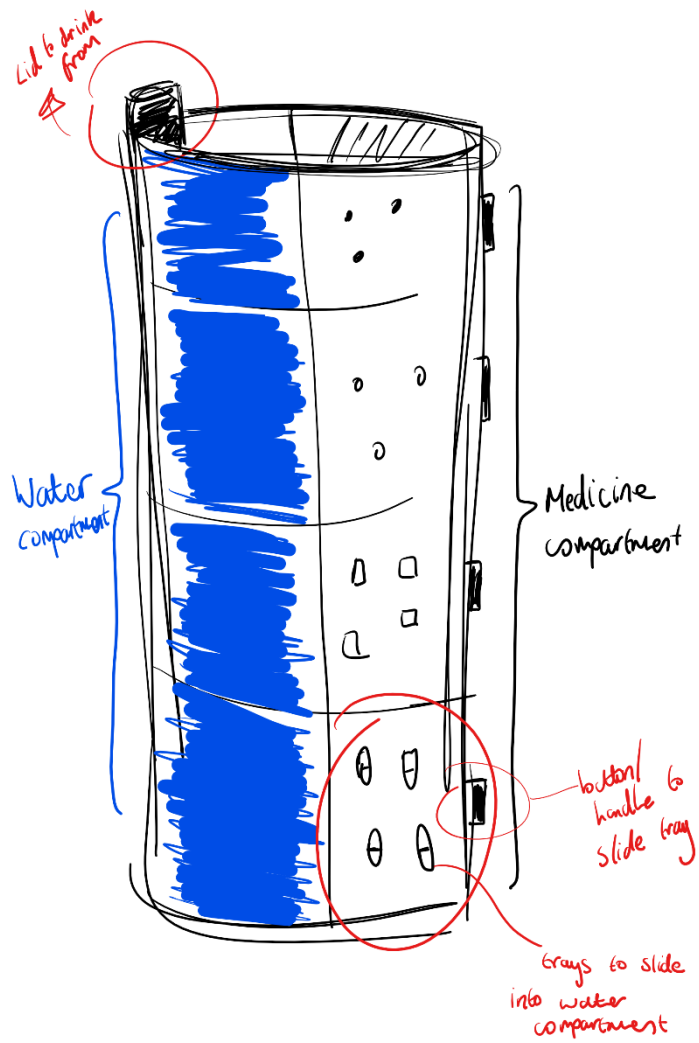
FLEXIBLE– Moveable

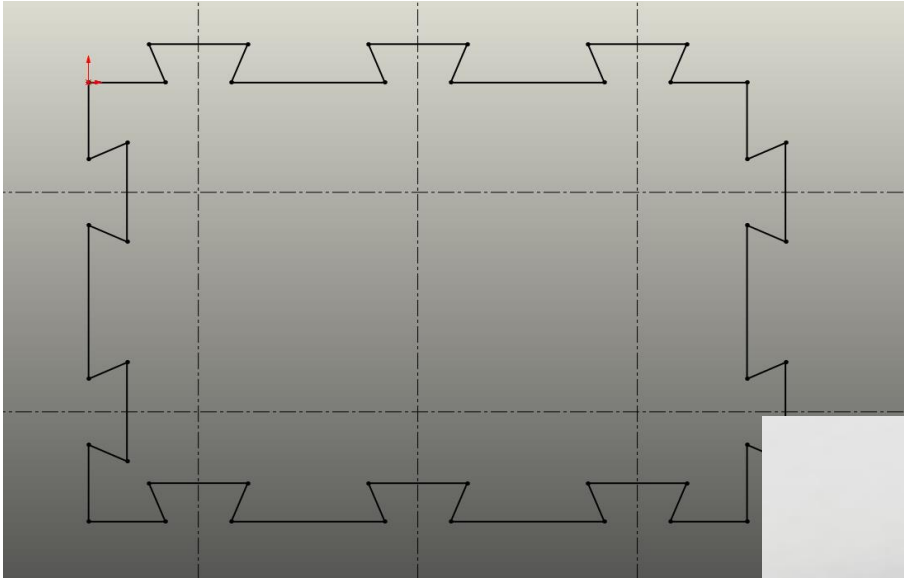
A decorative graphic in the bottom right corner consisting of several blue hexagons of varying shades. Two hexagons are a medium blue and contain the words 'NOTIFY' and 'REMINDER' in white, bold, sans-serif capital letters. Other hexagons in lighter shades of blue are partially visible around them.

**NOTIFY**

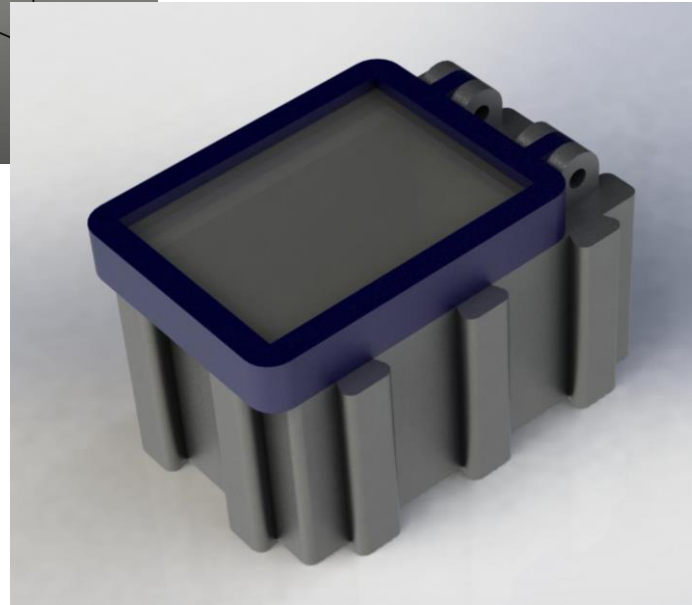
**REMINDER**

# CONCEPT

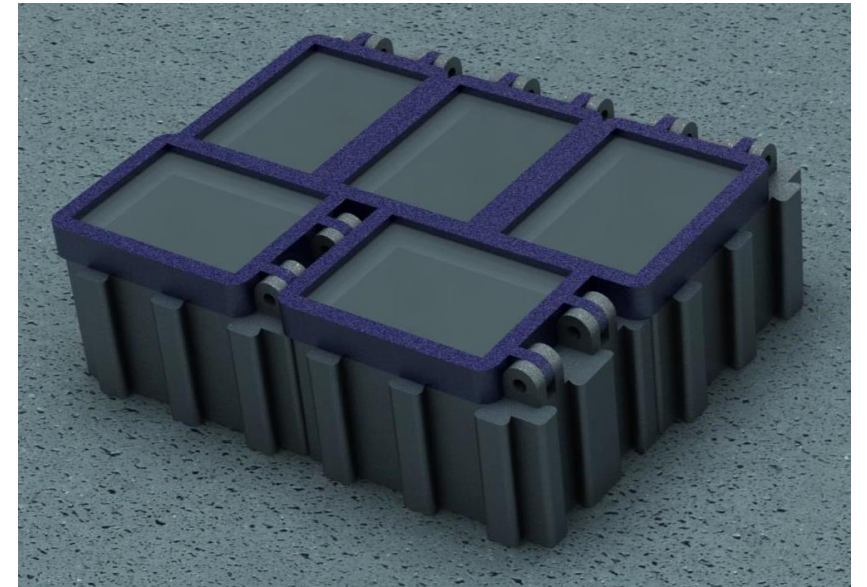




Cross section of a box

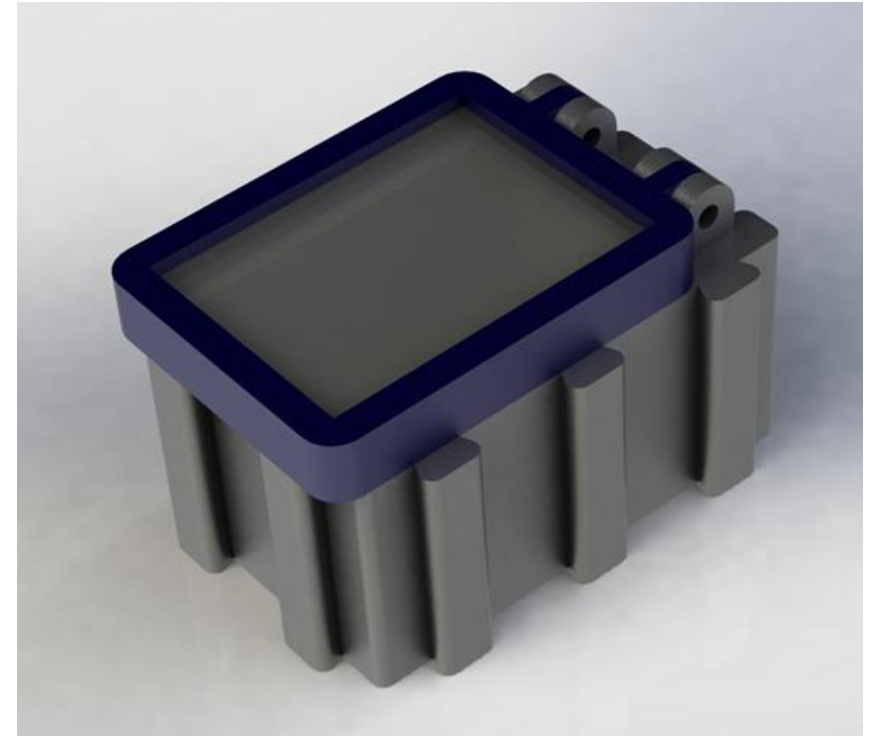


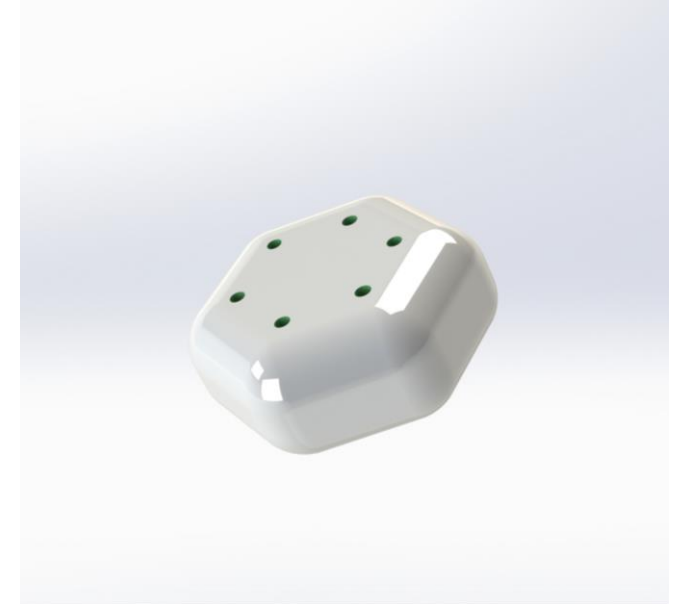
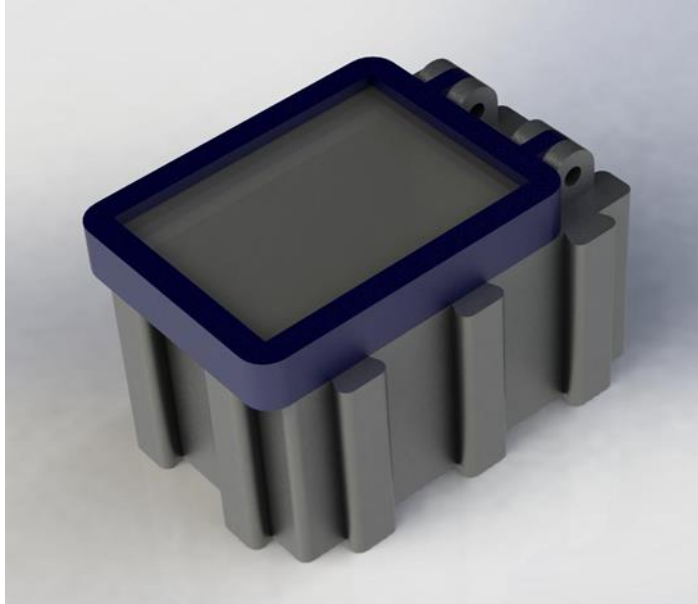
Rendered picture of  
several boxes combined  
together





	Bottle	Box
Realizability (35%)	3	8
Simplicity (25%)	7	6
Reliability (25%)	5	7
Innovativeness (15%)	8	6
<b>Total</b>	<b>5.25</b>	<b>6.95</b>





# AESTHETIC OPTIMIZE

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Group 7

# M-BOX

AUG 2nd



Put your heart at rest.

# M-BOX

2  
AUG  
2019

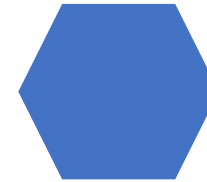
Put your heart at rest.

Looking forward  
to meet  
you.





# Selected Plan And Reasons



## M-BOX network

1. bluetooth module
2. WiFi module
3. AD hoc network module



## infor record

1. Weight detection
2. switching circuit



## communicate with phone

1. bluetooth module
2. WiFi module

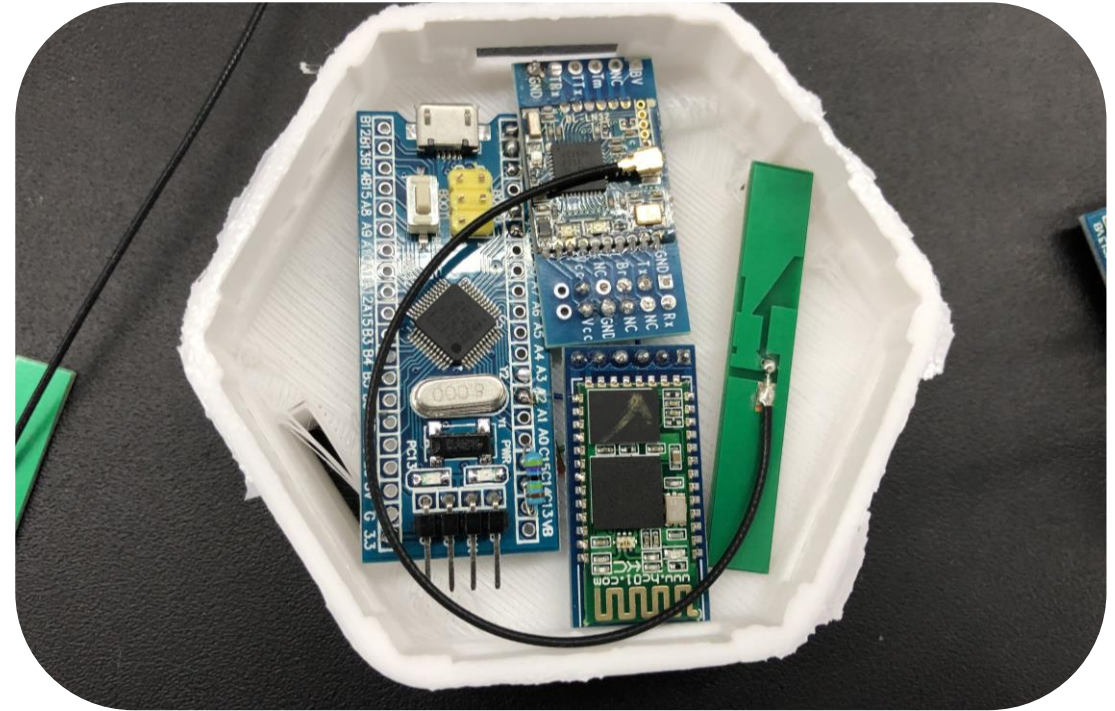
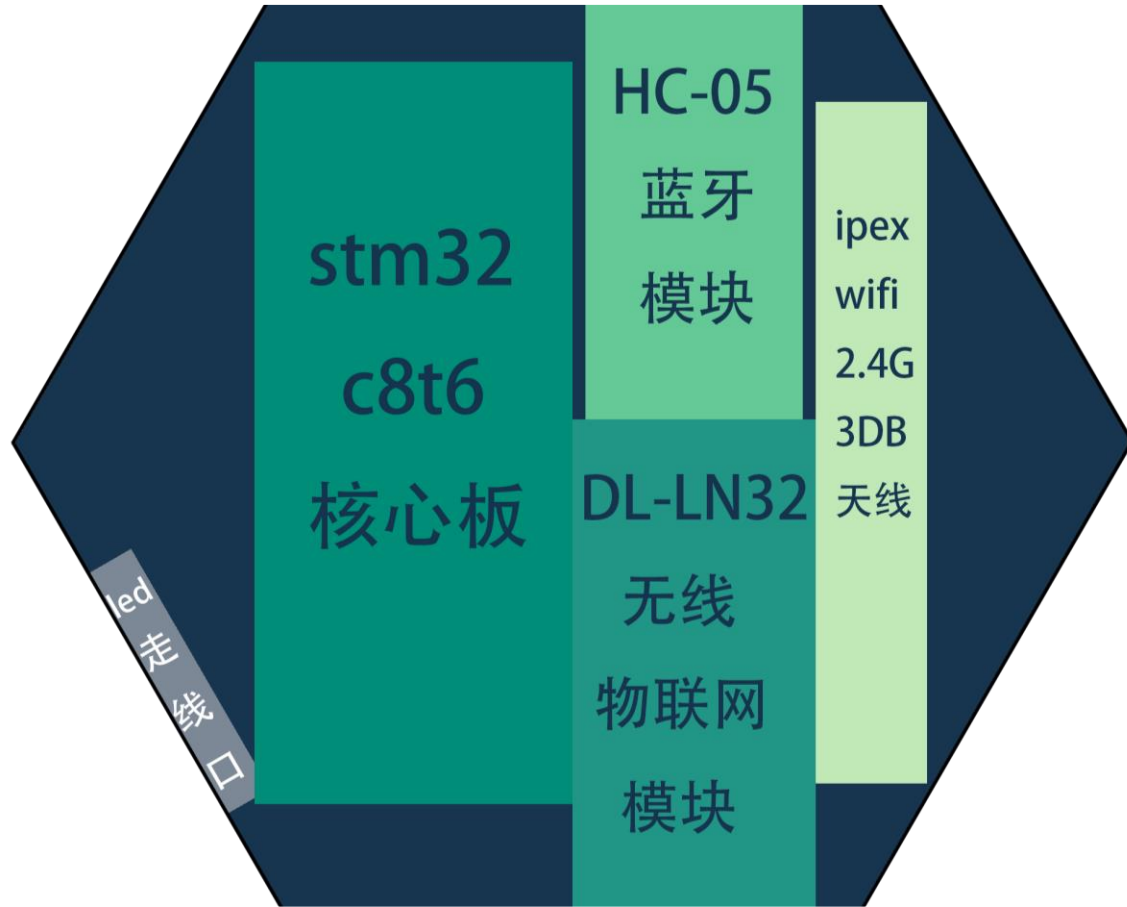


## easy access data for children

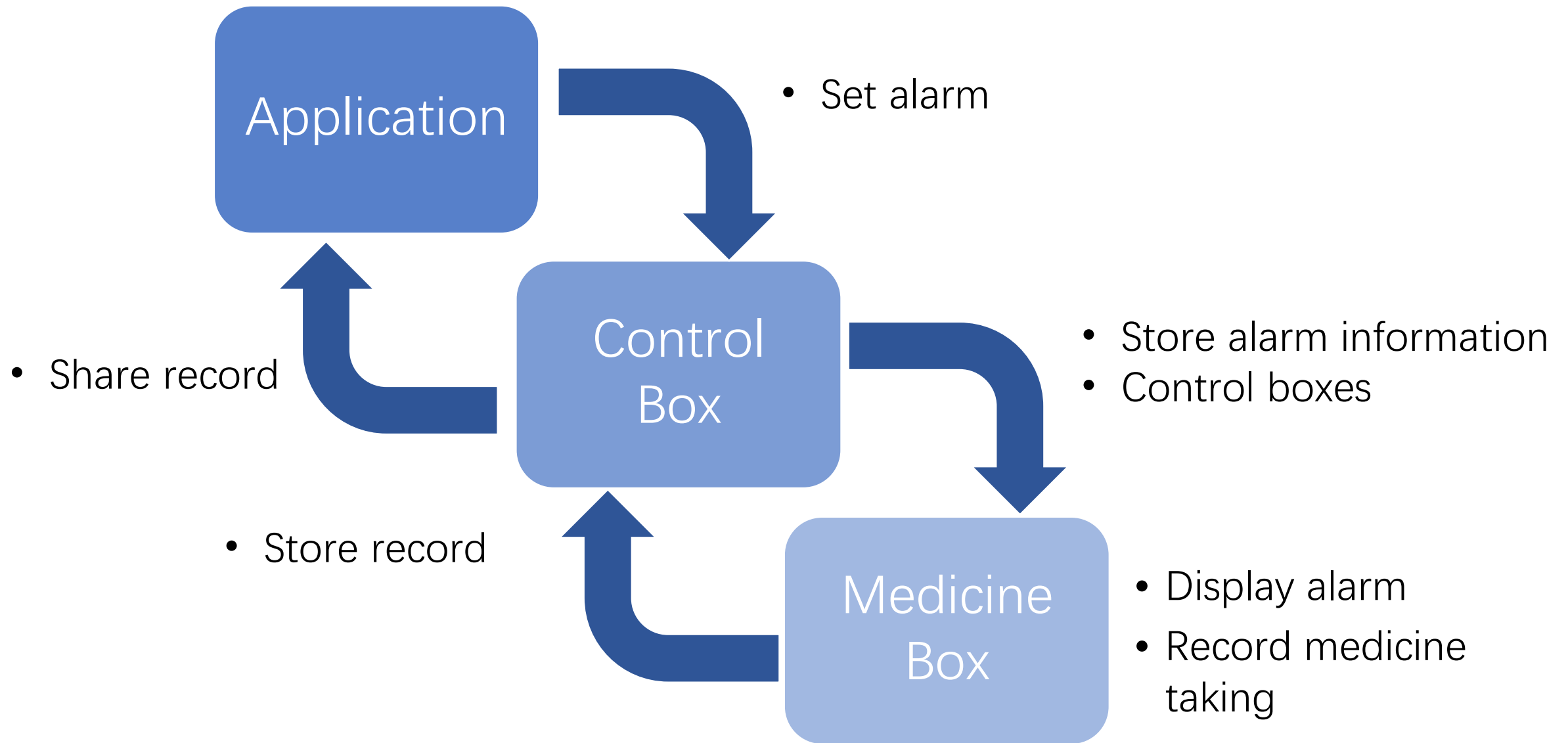
1. blockchain
2. Alibaba Cloud



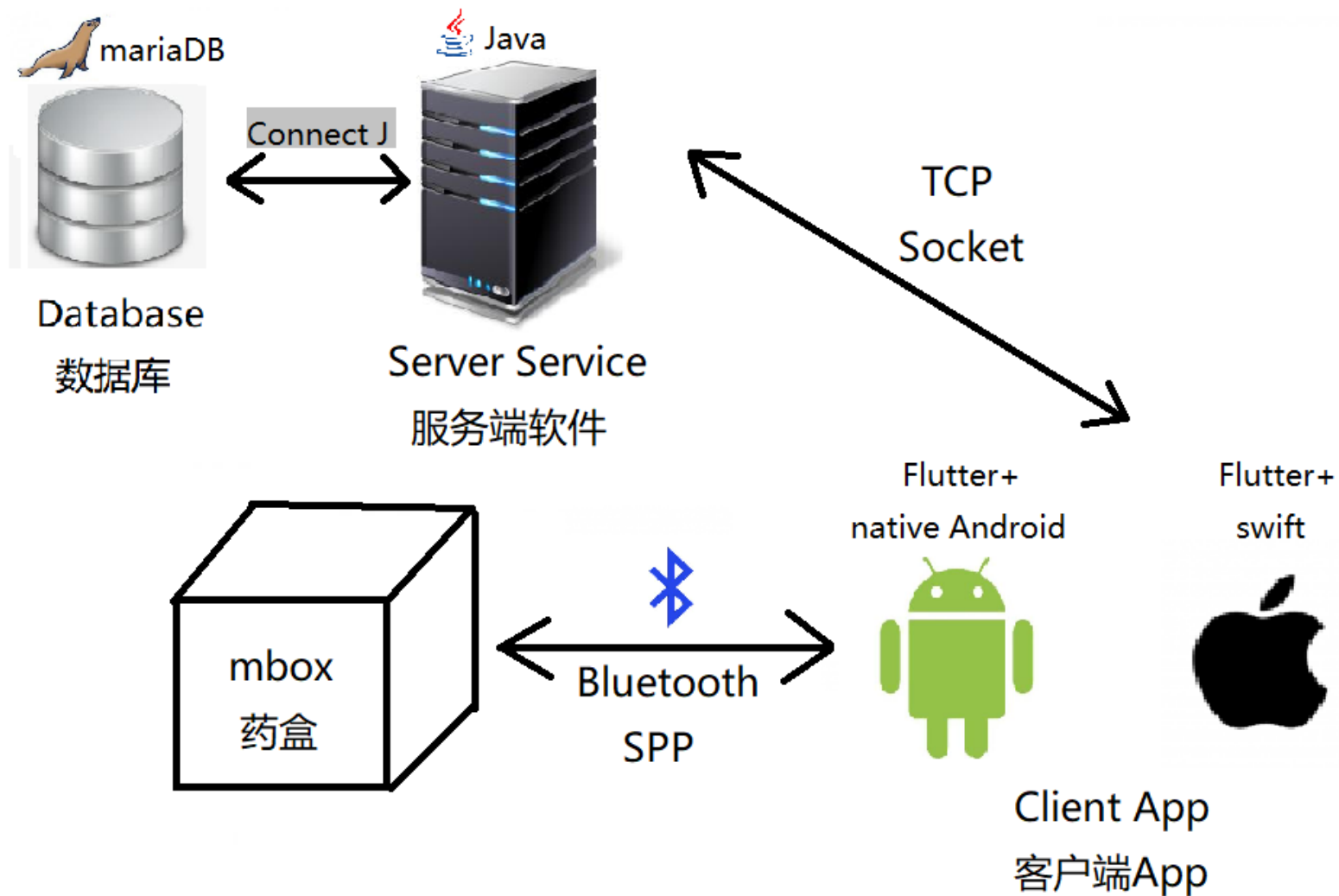
# Final Module Sample



only Master box has bluetooth module



# System diagram





```
davidmc@mboxServer: ~/server
Dart_x64.stable.setup.exe Download logs preTest server SocketServer sql
davidmc@mboxServer:~$ cd s
-bash: cd: s: No such file or directory
davidmc@mboxServer:~$ cd server/
davidmc@mboxServer:~/server$ ls
logs old run.sh Server_v2.9.jar
davidmc@mboxServer:~/server$ tail -f logs/latest.log
[INFO]:/45.125.2.9:54478comes in
Jul 31, 2019 12:06:55 PM SocketServer main
INFO: /45.125.2.9:54478comes in
[INFO]:[/45.125.2.9:54478]:login
Jul 31, 2019 12:06:56 PM Service server
INFO: [/45.125.2.9:54478]:login
[INFO]:[/45.125.2.9:54478]:request=login&sessionID=ff196d51c3bf46e4a24c24c5d8870
0c0&user_name=tester1&password=VRly8ha4hi0ZZvVo+12UicIvhgH7doDQkkjrcPo7JS+JQCBKz
3MUaAd5/Xv6BHIvVm78OI06bFei6o+f4OYHJXCKQ8drSYqKxLb7o8xTCRFFi/5VWnDAsqDwmcFBY6xvQ
+dYAnFnomsJ/Q9vJ30xIRF+RTG88ijGbXzTpOWFhQE=
Jul 31, 2019 12:06:56 PM Service server
INFO: [/45.125.2.9:54478]:request=login&sessionID=ff196d51c3bf46e4a24c24c5d88700
c0&user_name=tester1&password=VRly8ha4hi0ZZvVo+12UicIvhgH7doDQkkjrcPo7JS+JQCBKz3
MUaAd5/Xv6BHIvVm78OI06bFei6o+f4OYHJXCKQ8drSYqKxLb7o8xTCRFFi/5VWnDAsqDwmcFBY6xvQ+
dYAnFnomsJ/Q9vJ30xIRF+RTG88ijGbXzTpOWFhQE=
disconnect
```

Statistic

Refresh Refresh on selection Settings

txt xml Overview dart java properties txt xml

Overview dart java properties

Source File	Total Lines	Source Cod...	Source Cod...	Comment Li...	Comment Li...	Blank Lines	Blank Lines ...
client_API.dart	644	607	94%	18	3%	19	3%
i18n.dart	122	87	71%	14	11%	21	17%
i18n.dart	122	87	71%	14	11%	21	17%
main.dart	116	102	88%	2	2%	12	10%
main.dart	148	133	90%	2	1%	13	9%
widget_test.dart	30	14	47%	10	33%	6	20%
Total:	1212	1044	86%	70	6%	98	8%

Dart Analysis TODO Logcat Terminal Statistic

Success: Successfully calculated statistic for project 'server\_test' in 11.161 sec. (moments ago)

Overview java

Source File	Total Lines	Source Cod...	Source Cod...	Comment Li...	Comment Li...	Blank Lines	Blank Lines ...
LoginUtils.java	732	654	89%	38	5%	40	5%
Profile.java	12	7	58%	4	33%	1	8%
RSUtils.java	49	43	88%	4	8%	2	4%
Service.java	160	146	91%	4	2%	10	6%
Services.java	566	419	74%	120	21%	27	5%
Session.java	64	49	77%	4	6%	11	17%
SocketClient.java	62	54	87%	6	10%	2	3%
SocketServer.java	106	93	88%	5	5%	8	8%
Test.java	21	16	76%	4	19%	1	5%
Total:	1772	1481	84%	189	11%	102	6%

TODO Terminal Statistic

Success: Successfully calculated statistic for project 'SocketTest' in 0.447 sec. (moments ago)

mbox [C:\Users\Samuel\AndroidStudioProjects\mbox] - ...lib\main.dart [mbox] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

mbox \ lib \ main.dart

main.dart x form.dart x register\_form.dart x client\_API.dart x medicine\_data.dart x login\_form.dart

```
1 import 'package:flutter/material.dart';
2 import 'home_widget.dart';
3 import 'user.dart';
4 import 'form.dart';
5 import 'login_form.dart';
6 void main() => runApp(MyApp(
7   ));
8
9
10 class MyApp extends StatelessWidget {
11   static const String _title = 'My Medicine Box';
12   // This widget is the root of your application.
13   @override
14   Widget build(BuildContext context) {
15     return MaterialApp(
16       title: _title,
17       theme: ThemeData(
18         primarySwatch: Colors.lightBlue,
19       ), // ThemeData
20       home: myLoginForm(
21         //Home//
22         // appBar: AppBar(title:const Text(_title)),
23         //body: MyHomePage(),
24       ), // myLoginForm
25     ); // MaterialApp
26   }
27 }
28 class MyHomePage extends StatefulWidget{
```

Statistic

Refresh Refresh on selection Settings

Overview java properties txt xml

Extension	Count	Size SUM	Size MIN	Size MAX
ap_ (AP_ files)	1x	8kB	8kB	8kB
apk (APK files)	2x	69,624kB	34,812kB	34,812kB
bat (BAT files)	1x	2kB	2kB	2kB
bin (BIN files)	10x	38,541kB	0kB	17,922kB
d (D files)	2x	92kB	0kB	92kB
<b>Total:</b>	<b>133x</b>	<b>195,442kB</b>	<b>57,452kB</b>	<b>94,621kB</b>

Statistic Dart Analysis TODO Logcat Terminal

Success: Successfully calculated statistic for project 'mbox' in 2.203 sec. (moments ago)

mbox [C:\Users\Samuel\AndroidStudioProjects\mbox] - ...lib\client\_API.dart [mbox] - Android Studio

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

mbox \ lib \ client\_API.dart

main.dart x form.dart x register\_form.dart x client\_API.dart x medicine\_data.dart x login\_form.dart x user.dart x home\_widget.dart x Alarms.dart

```
493 //print("##a" + aRecord.toString());
494 )
495 ans["records"] = records;
496 print(response);
497 print(response["record_list"]);
498 ans.remove("error_msg");
499 ans["success"] = true;
500 } catch (e) {
501   ans["success"] = false;
502   print(e);
503 }
504 return ans;
505 }
506
507 static Future<Map<String, Object>> getIntakeRecordByName(
508   String uid, String token,
509   [String medicineName, int startTime, int endTime]) {
510   return _getIntakeRecord(uid, token, medicineName, null, startTime, endTime);
511 }
512
513 static Future<Map<String, Object>> getIntakeRecordByUID(
514   String uid, String token,
515   [String boxUID, int startTime, int endTime]) {
516   return _getIntakeRecord(uid, token, null, boxUID, startTime, endTime);
517 }
518
519 static Future<Map<String, Object>> getBoxes(String uid, String token) async {
520   Map<String, Object> ans = new Map<String, Object>();
```

Statistic

Refresh Refresh on selection Settings

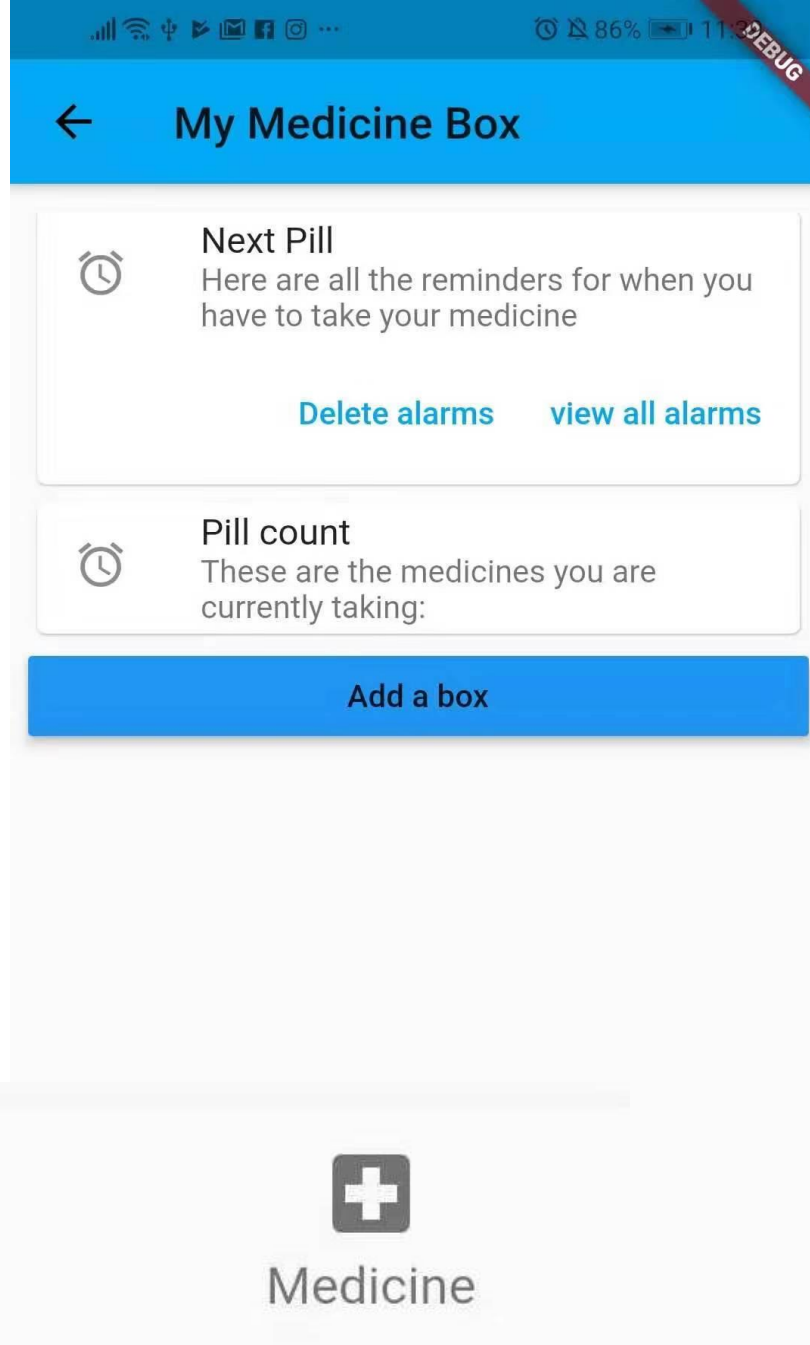
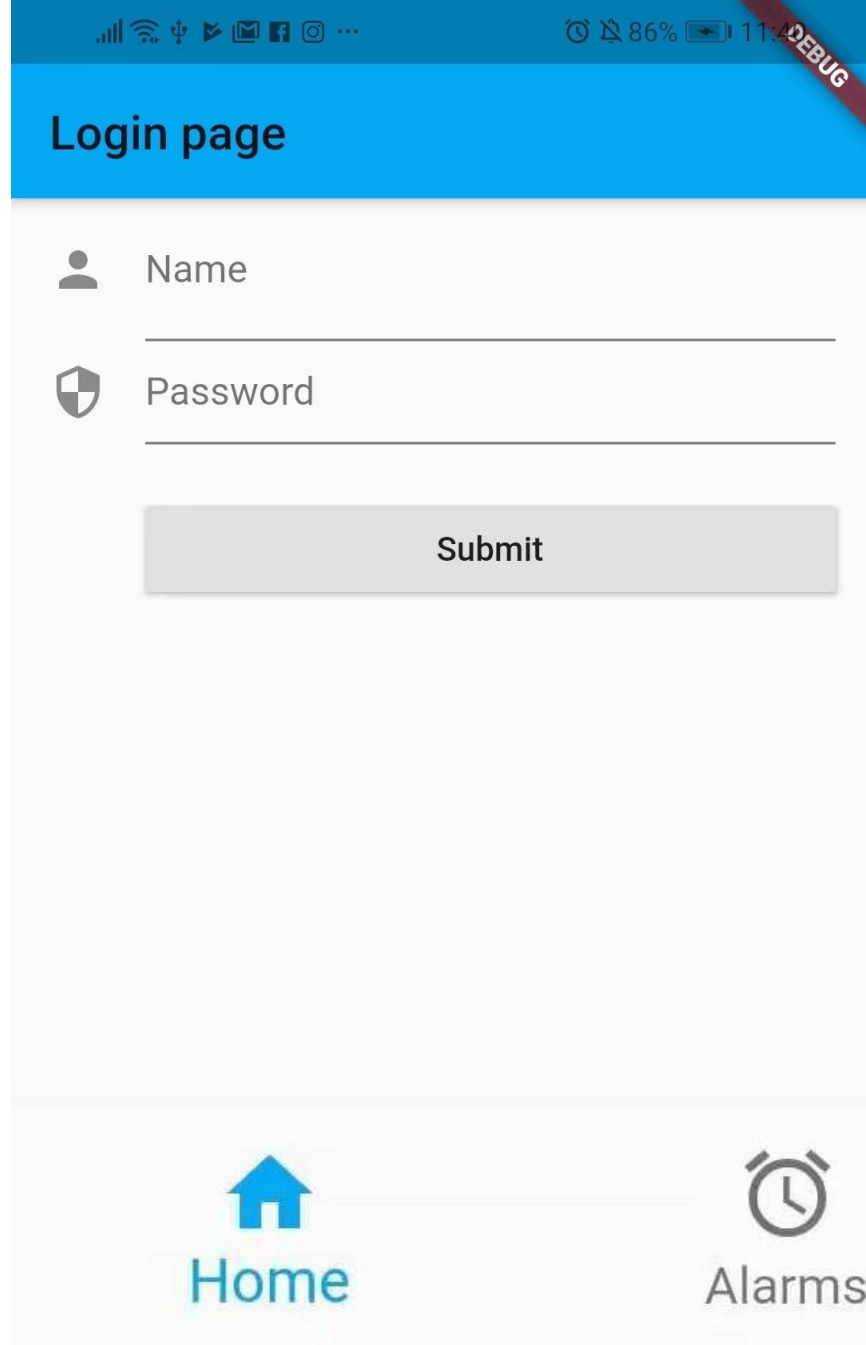
Overview java properties txt xml

Extension	Count	Size SUM	Size MIN	Size MAX	Size AVG	Lines	Lines MIN
ap_ (AP_ files)	1x	8kB	8kB	8kB	8kB	55	55
apk (APK files)	2x	69,624kB	34,812kB	34,812kB	34,812kB	517024	258512
bat (BAT files)	1x	2kB	2kB	2kB	2kB	90	90
bin (BIN files)	10x	38,541kB	0kB	17,922kB	3,854kB	617032	1
d (D files)	2x	92kB	0kB	92kB	46kB	2	1
<b>Total:</b>	<b>133x</b>	<b>195,442kB</b>	<b>57,452kB</b>	<b>94,621kB</b>	<b>70,698kB</b>	<b>2256004</b>	<b>50</b>

Statistic Dart Analysis TODO Logcat Terminal

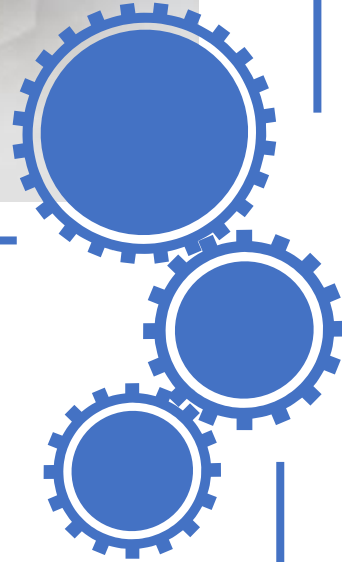
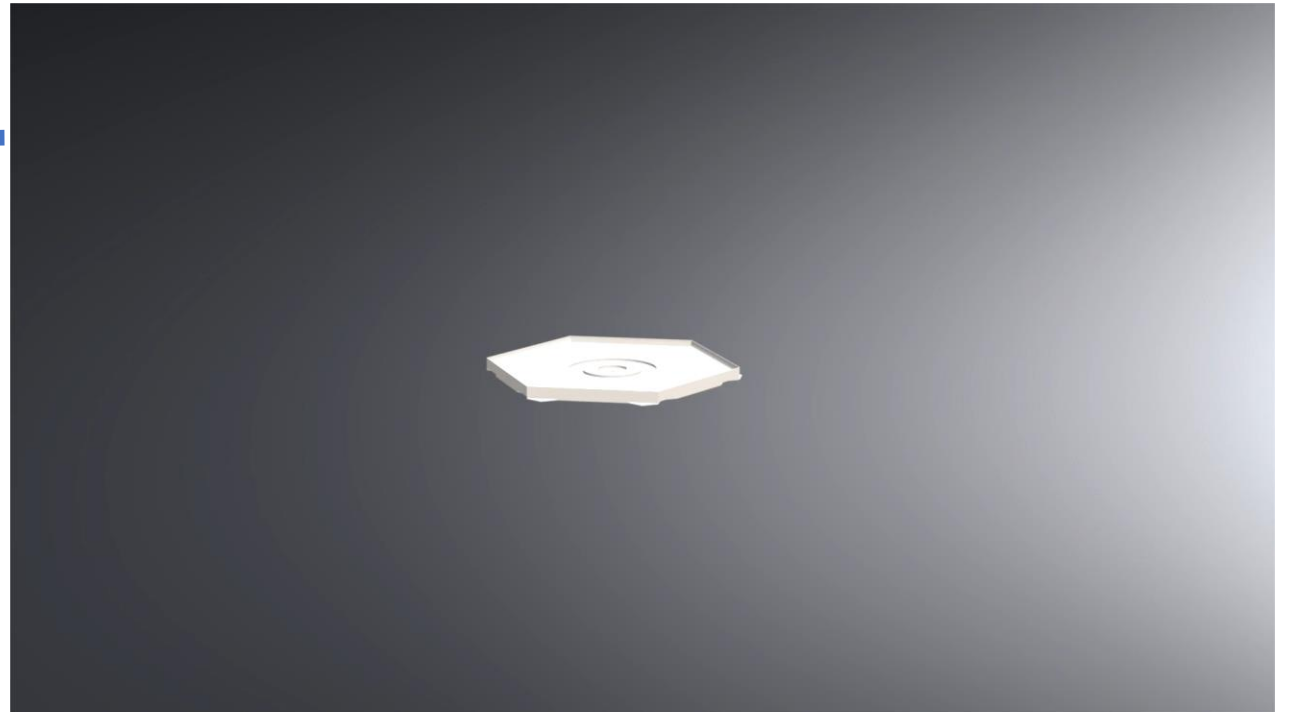
Success: Successfully calculated statistic for project 'mbox' in 2.203 sec. (moments ago)

519:38





TARGETED DESIGN

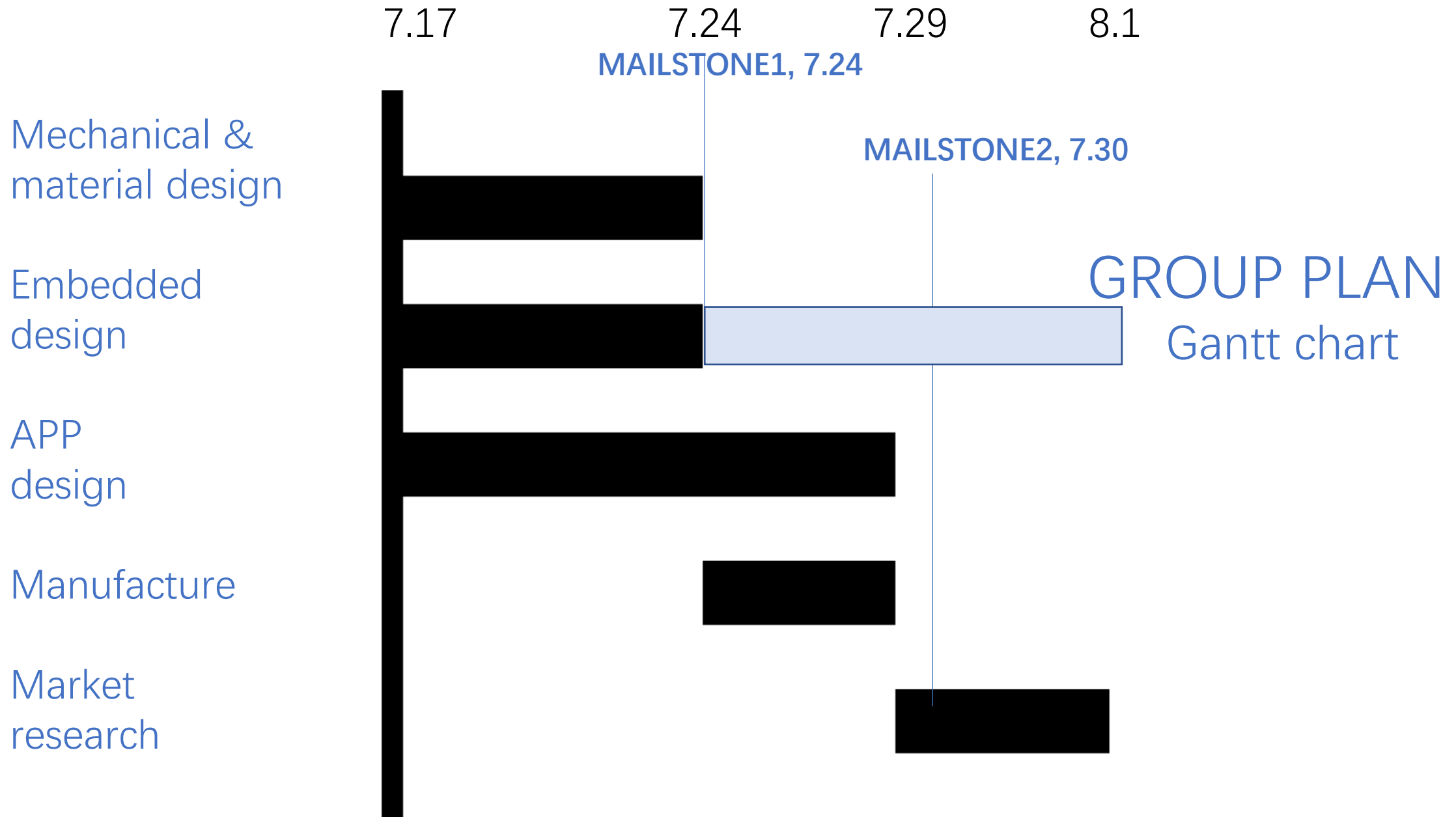




# PRODUCT ITERATION



1		unit price	amount	total price
2	IC	5	20	100
3	Circuit	3	30	90
4	Wire	0.2	100	20
5	Battery	16	10	160
6	Competitor research			500
7	Bluetooth device	20	10	200
8	magnet	0.11	100	110
9	LED	0.1	200	20
10	Wrapping&instructions&others			50
11	tools and materials			500
12	total			<b>1750</b>



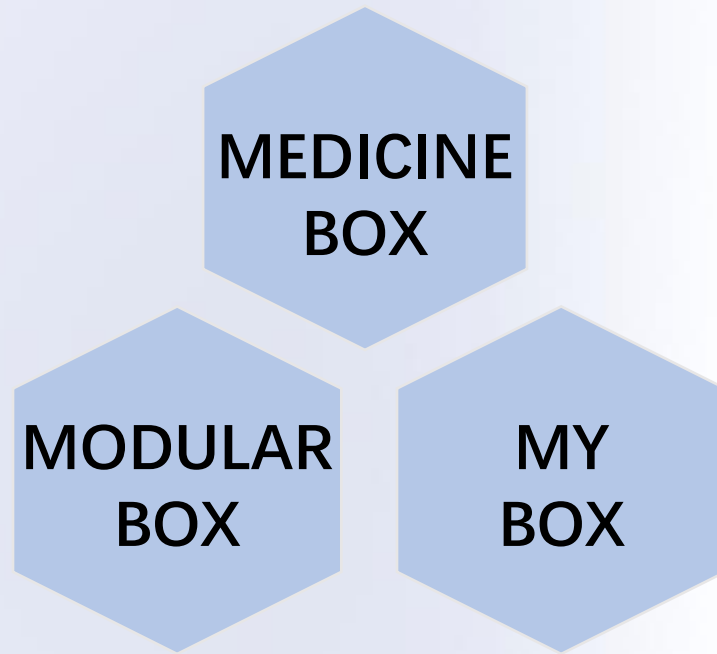
**PART 03**

**WHAT WE HAVE  
DONE?**



VIDEO

Remind when, what, how  
much medicine to take



Buy how many box you need  
Assemble them as you like

Upload your own medical record  
Share record with your family

It's  
M-box

-PUT YOUR HEART AT REST-

# WORK DIVISION

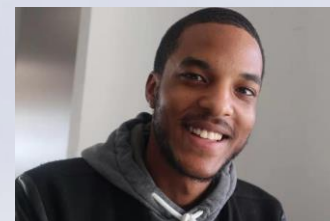
**Embedded**

徐至 陈卓宇



**Software**

满昌海 Samuel Bedeau



**Material**

陈衍冰



**Mechanism**

汪炜



**THANK YOU  
FOR MAKING A WONDERFUL SUMMER**

? Q&A

