

# 小组立项说明书初步样例

**ATS Client Project**

# 内容

- 项目简要
- 功能列表
- 技术列表
- 概要设计
- 人力需求
- 考核方案
- 进度规划

# 项目简要

- **概述：** 为了做FA更加便捷，解决新进FA机台系统无提示的问题，更方便地下载历史FA机台记录并生成报告的方式。
- **项目名字：** **ATS Client（ATS客户端）**

# 功能列表

1. 无需手动输入账号密码，点击即可进入ATS。
2. 当有新进FA时，提示用户查看FA机台信息。
3. 快速下载FA历史并生成报告。

# 技术列表

- Swift & Cocoa框架
- WebKit
- SwiftSoup
- XlsxReaderWriter
- JavaScript

# 概要设计

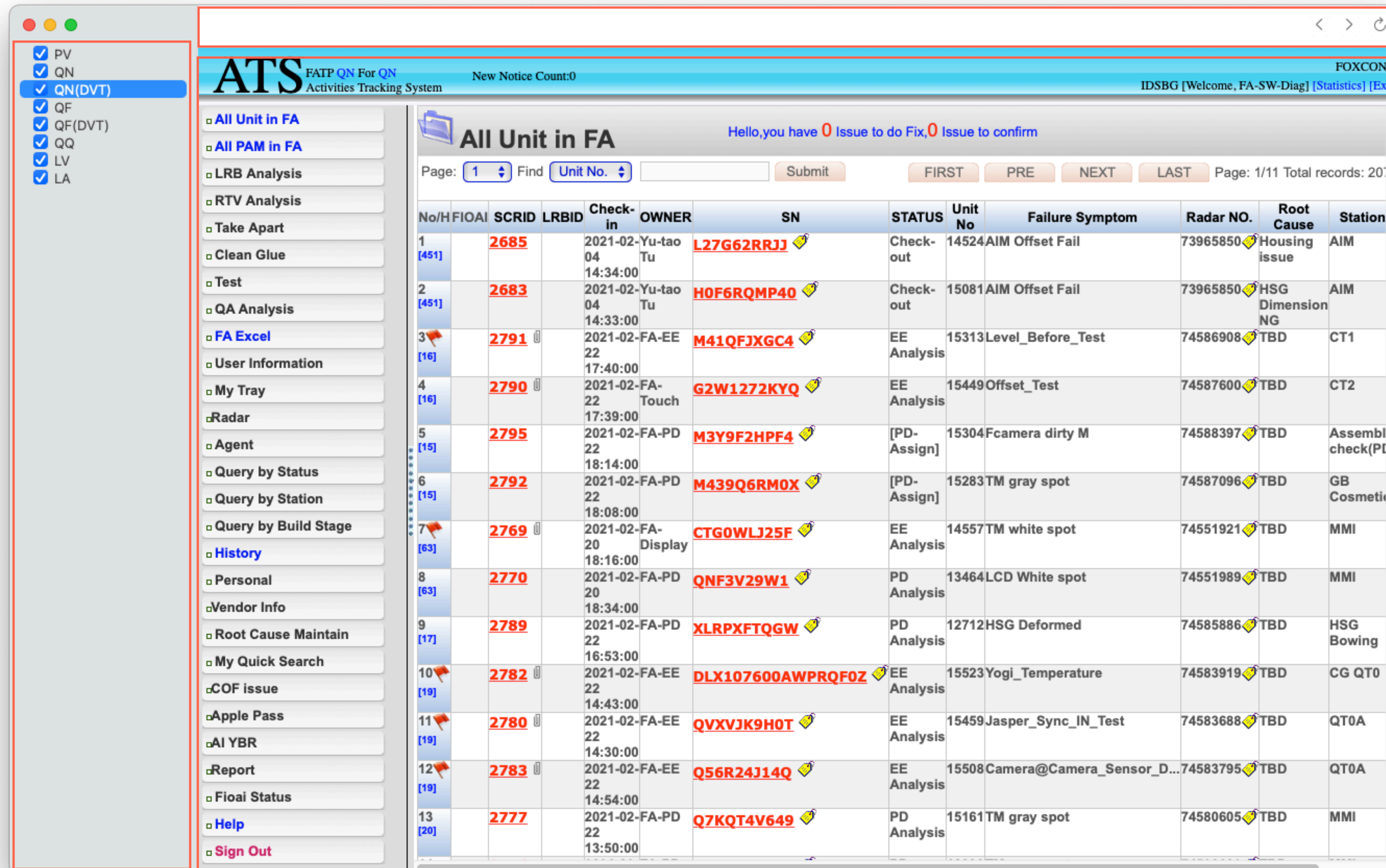
1. Main Interface Draft
2. Main Flow Chart
3. Get all projects from ATS - Flow Chart
4. Get FA Units- Flow Chart
5. Notify user when FA Units is coming
6. Auto login ATS without manually input account
7. Generate FA Report
8. Applcon Draft

# Main Interface Draft

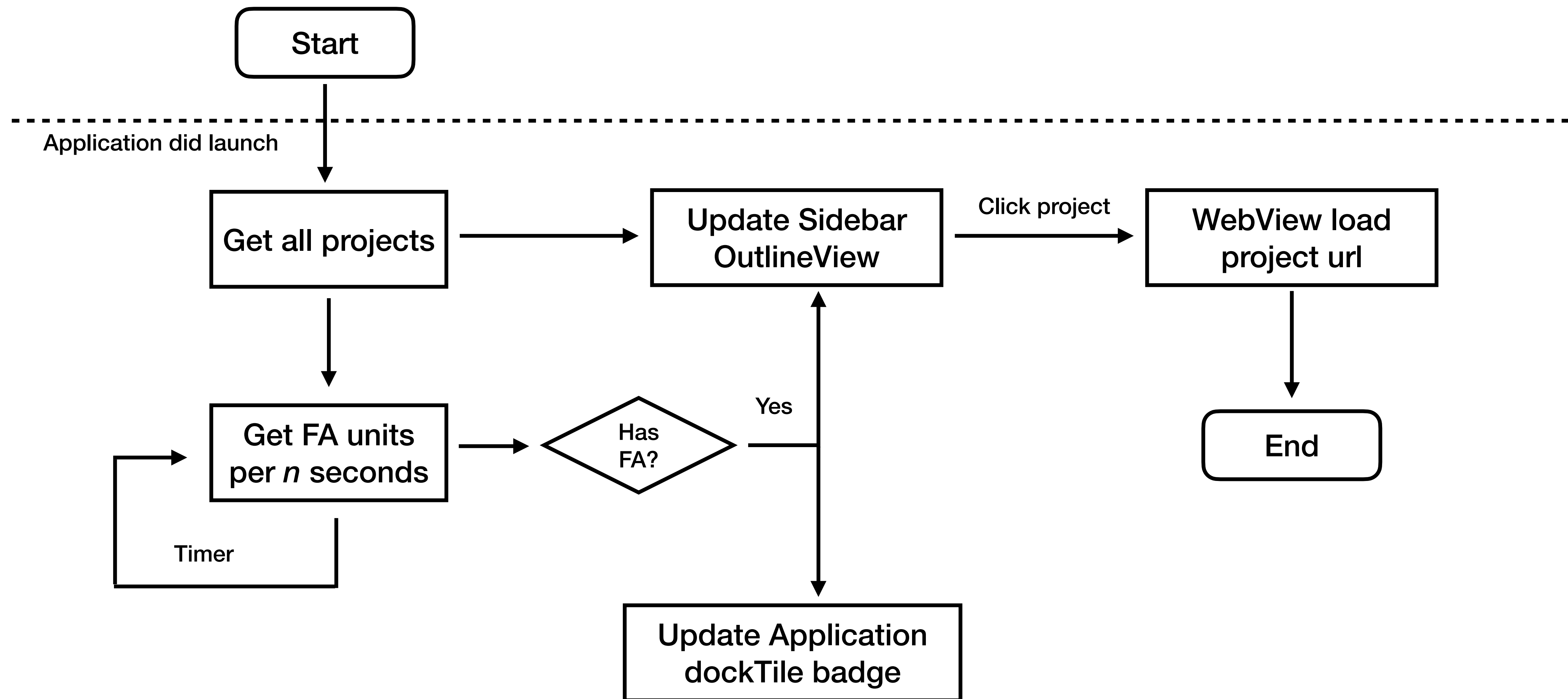
## Tool bar

## Project List

## Web View



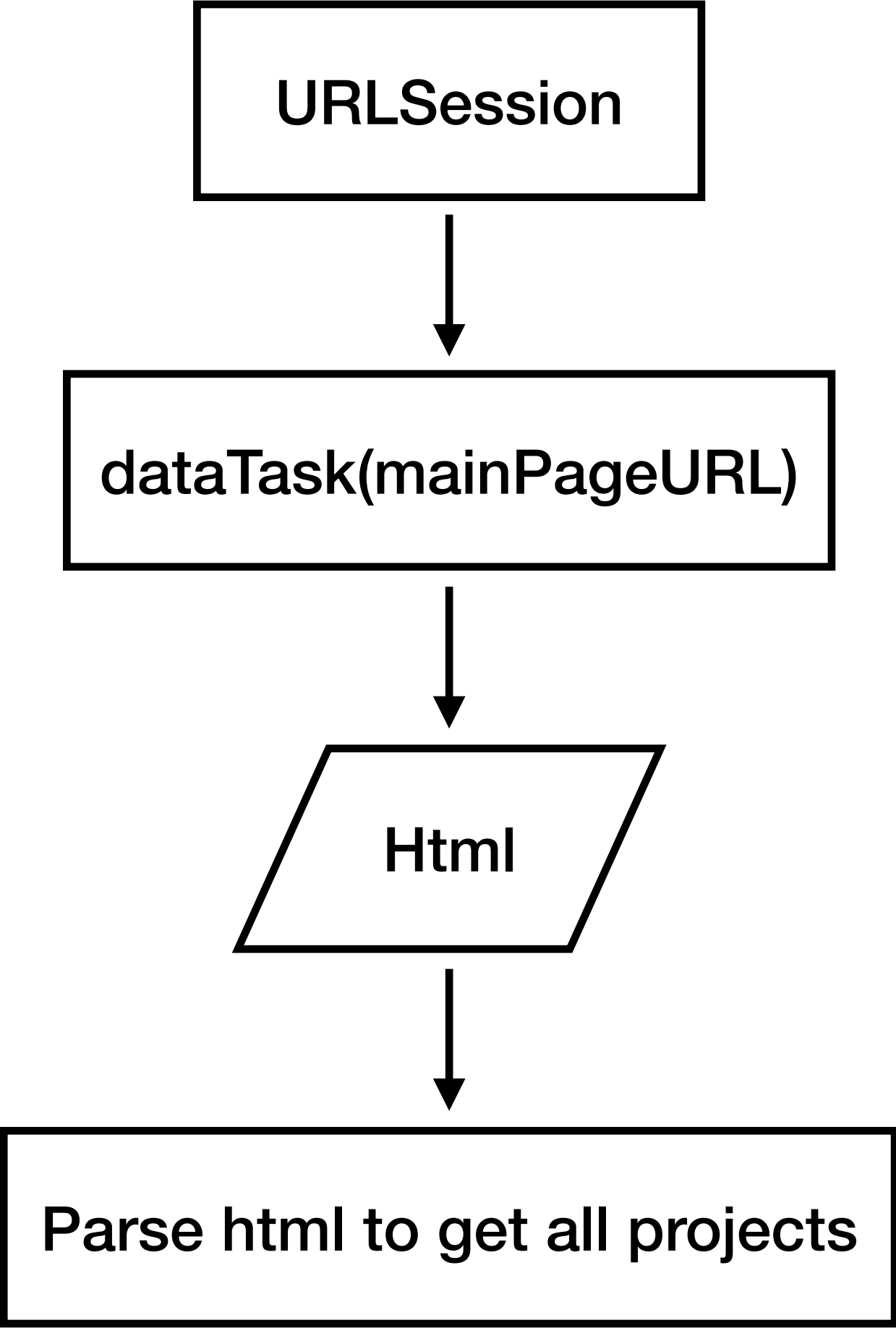
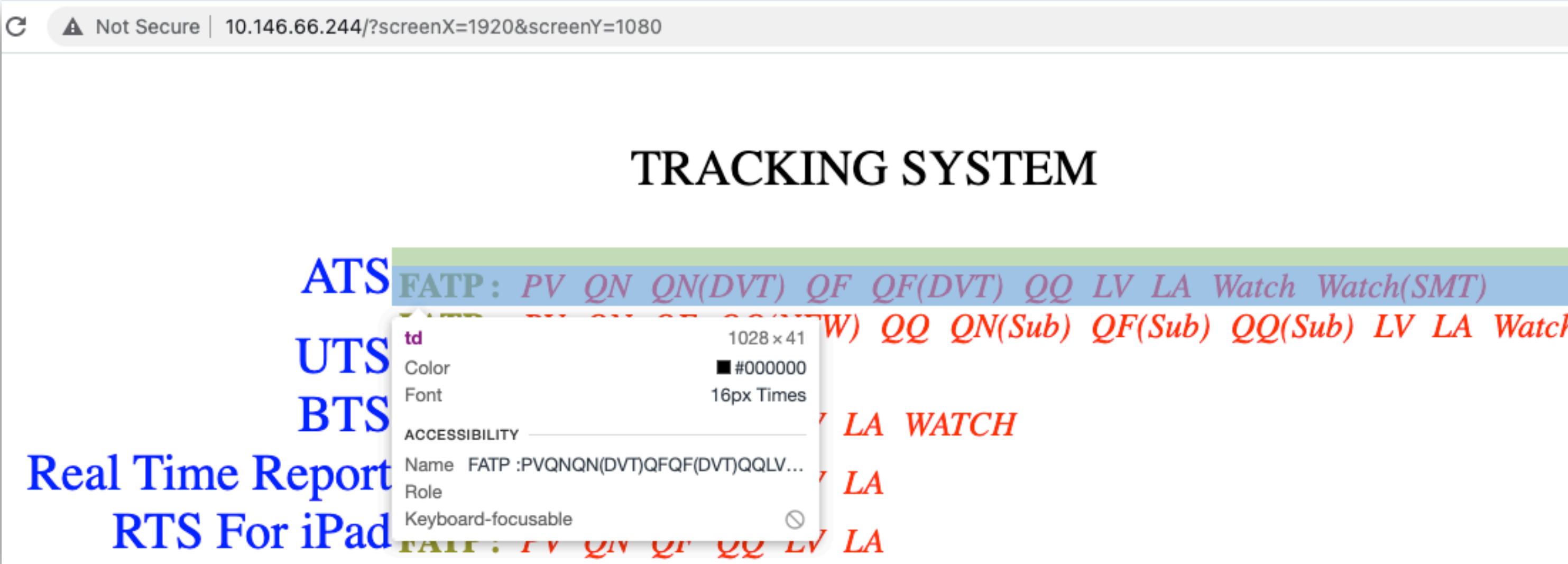
# Main Flow Chart





# Get all projects from ATS - Flow

```
let mainPageURL = http://10.146.66.244/?screenX=1920&screenY=1080
```



# Get all projects from ATS - implementation

```
func getProducts(for name: ProjectName, _ parser: ((String) -> [Product]?)) -> [Product]? {  
    if let result = httpClient.get(url: mainURL), (200...299).contains(result.response.statusCode) {  
        if let mimeType = result.response.mimeType, mimeType == "text/html",  
            let data = result.data, let string = String(data: data, encoding: .utf8) {  
            return parser?(string)  
        }  
    }  
}
```

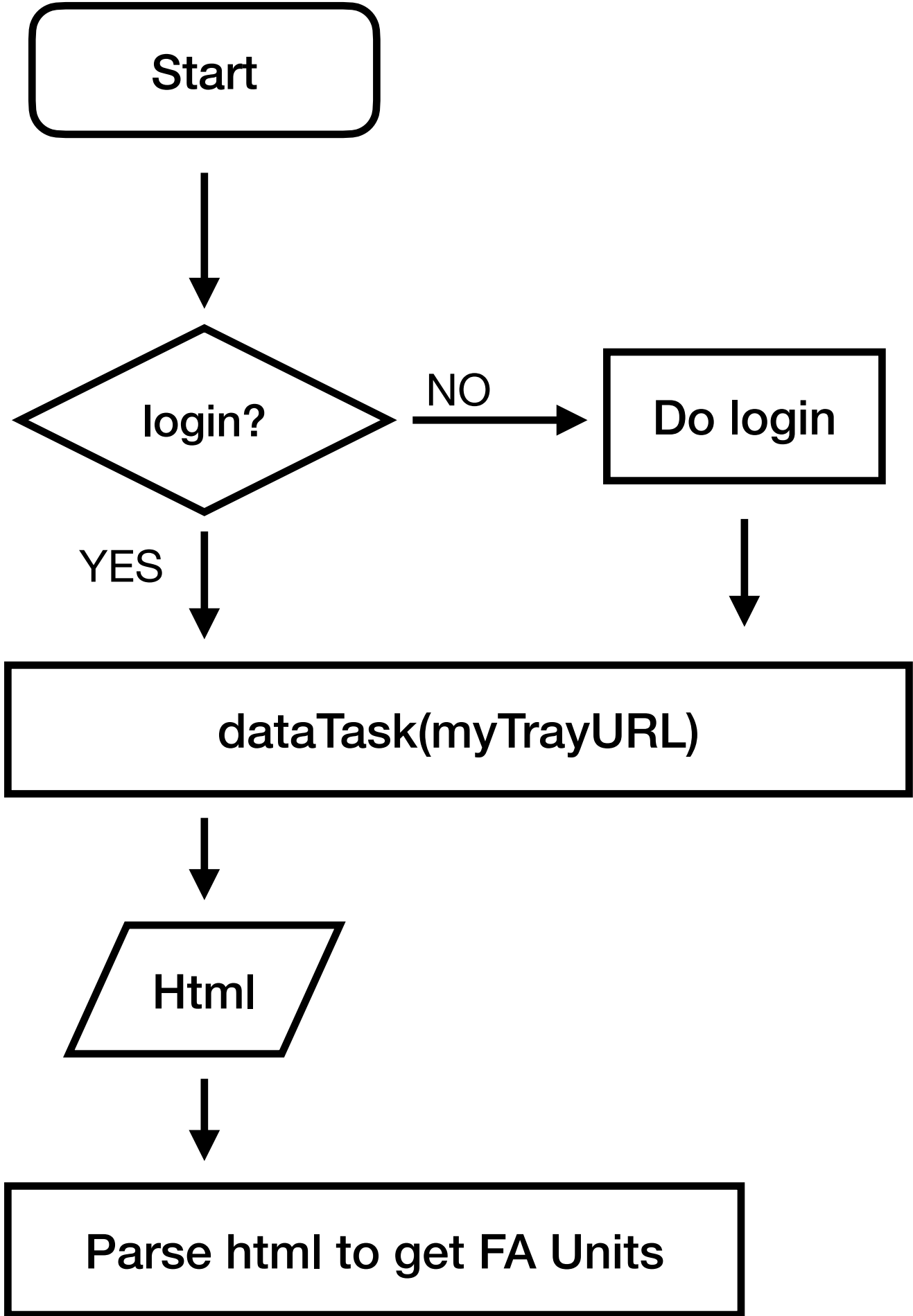
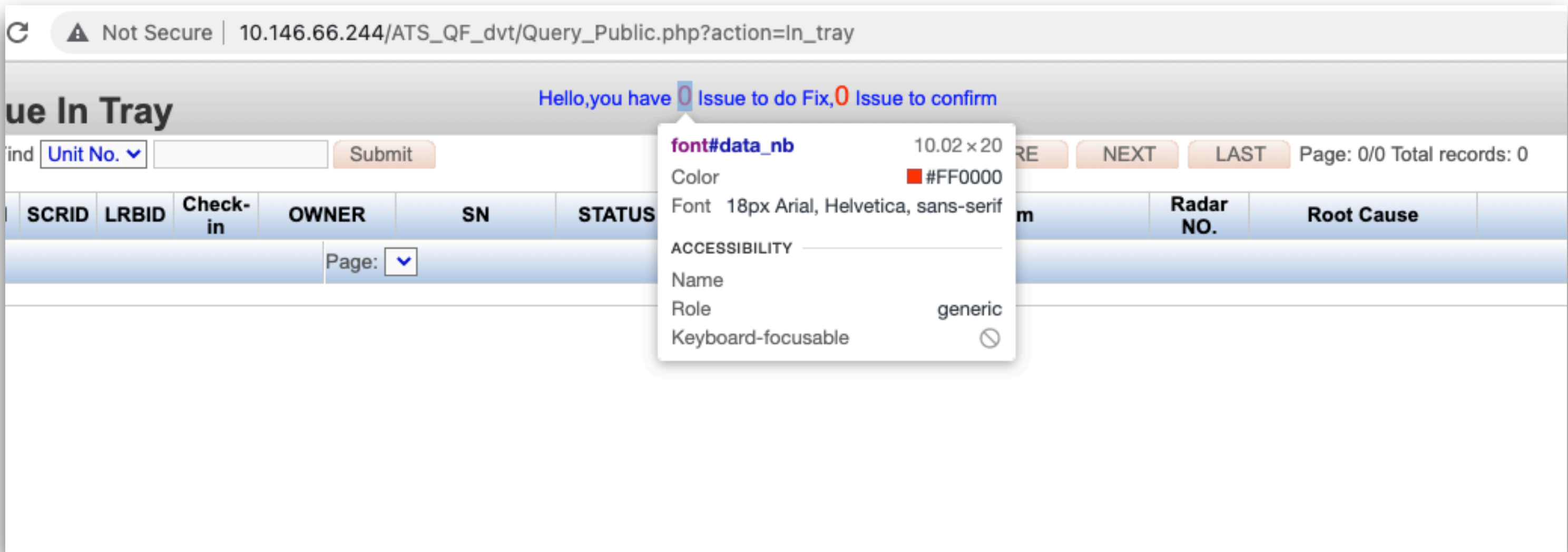
[HTTPClient](http://10.149.157.23:3000/Jason/ATSentry/src/master/ATSentry/NetworkTool/HTTPClient.swift) is a simple class that encapsulates URLSession. You can view the source code from repository “ATSentry” at <http://10.149.157.23:3000/Jason/ATSentry/src/master/ATSentry/NetworkTool/HTTPClient.swift>

Use the third part library [SwiftSoup](#) to parse the html to get data you want.

# Get FA Units (for example: QF) - Flow

let myTrayURL = [http://10.146.66.244/ATS\\_QF\\_dvt/Query\\_Public.php?action=In\\_tray](http://10.146.66.244/ATS_QF_dvt/Query_Public.php?action=In_tray)

let loginURL = [http://10.146.66.244/ATS\\_QF\\_dvt/Login.php](http://10.146.66.244/ATS_QF_dvt/Login.php)



# Get FA Units - implementation

```
func login(product: Product) -> Bool {
    let postData = product.account.description.data(using: .utf8)

    if let result = httpClient.post(url: product.loginURL, data: postData),
        (200...299).contains(result.response.statusCode) {
        return true
    }
    return false
}
```

```
struct Account: CustomStringConvertible {
    var nameKey = "UserLoginID"
    var passKey = "UserPWD"
    var username: String
    var password: String

    var description: String {
        return "\(nameKey)=\(username)&\(passKey)=\(password)"
    }
}

struct Product {
    var name: String
    var loginURL: URL
    var myTrayURL: URL
    var account = Account(username: "xxxxxxx", password: "xxxxxxx")
}
```

```
func getFAUnits(from product: Product, _ parser: ((String) -> (Int, Int)?)) -> (fix: Int, confirm: Int)? {
    if let result = httpClient.get(url: product.myTrayURL), (200...299).contains(result.response.statusCode) {
        if let mimeType = result.response.mimeType, mimeType == "text/html",
            let data = result.data, let string = String(data: data, encoding: .utf8) {

            if string.contains("top.location.href=\"./Pre_Index.php\";") {
                if login(product: product) {
                    return getFAUnits(from: product, parser)
                }
            } else {
                return parser?(string)
            }
        }
    }
    return nil
}
```

# Perform a task at regular intervals - implementation

Execute getFAUnits per 30 seconds

```
timer = Timer.scheduledTimer(timeInterval: 30.0, target: self, selector: #selector(getFAUnits), userInfo: nil, repeats: true)
timer.fire()
```

```
@objc func getFAUnits(from product: Product, _ parser: ((String) -> (Int, Int)?)) -> (fix: Int, confirm: Int)? {
    if let result = httpClient.get(url: product.myTrayURL), (200...299).contains(result.response.statusCode) {
        if let mimeType = result.response.mimeType, mimeType == "text/html",
            let data = result.data, let string = String(data: data, encoding: .utf8) {
            if string.contains("top.location.href=\"./Pre_Index.php\";") {
                if login(product: product) {
                    return getFAUnits(from: product, parser)
                }
            } else {
                return parser?(string)
            }
        }
        return nil
    }
}
```

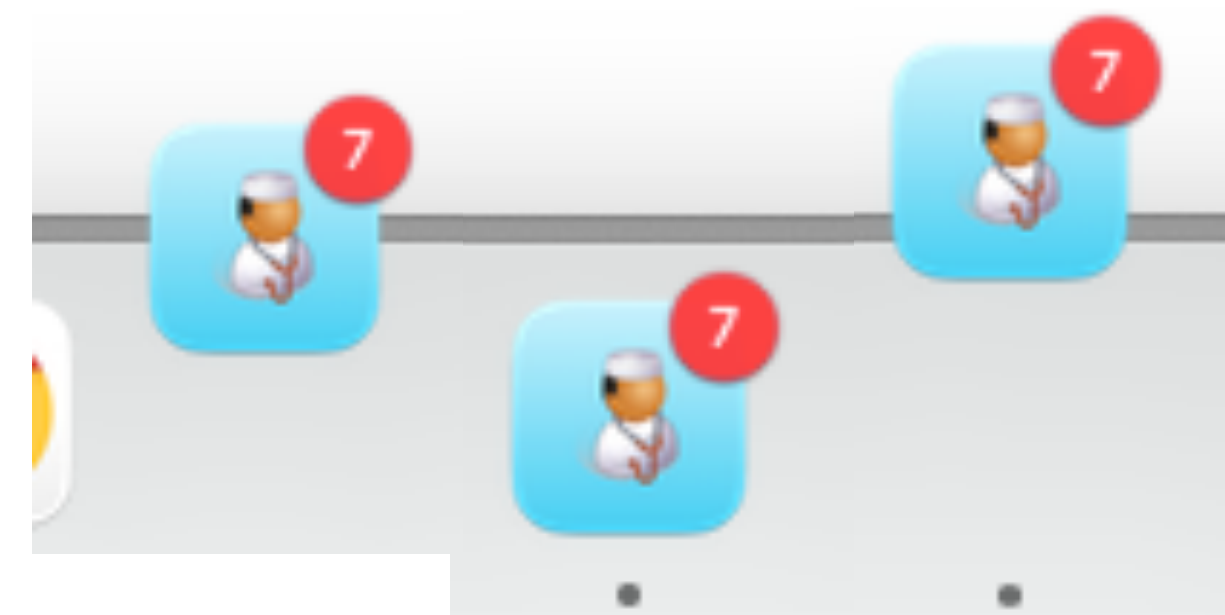
# Notify user when FA Units is coming.

```
if numberOfUnits > 0 {
    DispatchQueue.main.async {
        self.sourceList.reloadData()
        NSApp.dockTile.badgeLabel = String(numberOfUnits)

        if self.request != nil {
            NSApp.cancelUserAttentionRequest(self.request!)
        }
        self.request = NSApp.requestUserAttention(.criticalRequest)
    }
} else {
    DispatchQueue.main.async {
        self.sourceList.reloadData()
        NSApp.dockTile.badgeLabel = nil

        if self.request != nil {
            NSApp.cancelUserAttentionRequest(self.request!)
        }
    }
}
```

AppIcon bounce to request user Attention





# Auto login ATS without manually input account

When WKWebView load the ATS login page, execute js to auto login.

```
extension ContentViewController: WKNavigationDelegate {  
    func webView(_ webView: WKWebView, didFinish navigation: WKNavigation!) {  
        guard let url = webView.url else { return }  
        // need to login  
        if url.lastPathComponent == "Pre_Index.php" {  
            let userName = UserDefaults.standard.string(forKey: "UserName")!  
            let password = UserDefaults.standard.string(forKey: "Password")!  
            loginATS(withUser: userName, password: password)  
        }  
    }  
}
```

## login.js

```
(function() {  
    document.getElementsByName("UserLoginID")[0].value = "%@";  
    document.getElementsByName("UserPWD")[0].value = "%@";  
    document.getElementsByName("LoginForm")[0].submit();  
})();
```

```
func loginATS(withUser user: String, password: String) {  
    let scriptFileURL = Bundle.main.resourceURL?.appendingPathComponent("login.js", isDirectory: false)  
    guard let scriptTemplate = try? String(contentsOf: scriptFileURL!, encoding: .utf8) else {  
        NSLog("Error: Failed to read Resources/login.js file content!")  
        return  
    }  
    let script = String(format: scriptTemplate, user, password)  
    self.webView.evaluateJavaScript(script) { (data: Any?, error: Error?) in  
        if let error = error {  
            NSLog(error)  
        }  
    }  
}
```

# Generate FA Report

let historyURL= http://10.146.66.244/ATS\_QF\_dvt/Query\_Public.php?action=AnalysisHistory

Query by Analysis History												
Hello,you have 0 Issue to do Fix,0 Issue to confirm												
Find Unit No. Submit FIRST PRE NEXT LAST Page: 1/1 Total records: 16												
AI	SCRID	LRBID	Check-in	OWNER	SN	STATUS	Unit No	Failure Symptom	Radar NO.	Root Cause	Station	Last Update
	128		2021-02-22 16:52:00	FA-EE	JNL73FHW7W	EE Analysis	11362	SCRP_LPP_Inductance_Free_Air_Cal	74585622	TBD	CT2	2021-02-23 08:37:37
	98		2021-02-19 15:40:00	FA-IE	G9L77LW4P1	IE Analysis	10908	Pearl_Status	74510422	5T cable buzz	CT2	2021-02-23 08:37:10
	127		2021-02-22 16:51:00	FA-EE	XDYJX27JQ2	EE Analysis	11374	SCRP_LPP_Inductance_Free_Air_Cal	74585720	TBD	CT2	2021-02-23 08:33:45
	114		2021-02-20 18:18:00	Repair	XY34MRQ2CT	Unit-Done	11138	Compare_HS_Color_with_CLHS	74551919	Assembly issue	CT2	2021-02-22 18:54:47
	132		2021-02-22 17:24:00	FA-EE	MDHY65W7MN	EE Analysis	10619	Max_Pack_Voltage	74587234	TBD	QT0A	2021-02-22 17:32:49
	131		2021-02-22 17:24:00	FA-EE	J46T17N43Y	EE Analysis	10736	Max_Pack_Voltage	74587171	TBD	QT0A	2021-02-22 17:32:40
	7		2021-02-10 09:19:00	Repair	CY26269WCD	Check-out	10095	Jasper@RDF_Resistance_Start	74166696	RTV HSG	QT0A	2021-02-22 17:19:20
	44		2021-02-15 09:32:00	Repair	KXX39KGQ1W	Check-out	10422	Mic@PK_MAG@Compass	74307211	HSG Glue Overflow	QT0A	2021-02-22 14:57:42
	2		2021-02-09 09:44:00	Repair	GQ67J4THP7	Check-out	10036	Camera_Sensor_Detect	74121955	MLB Component Drop Off	QT0A	2021-02-20 14:28:44
	45		2021-02-15 10:39:00	Repair	N6L4M4650Y	Unit-Done	10428	SCRP_LPP_Inductance_Free_Air_Cal	74308286	NTF	CT2	2021-02-20 10:07:25
	19		2021-02-11 15:23:00	Repair	MXVXFG6X1C	Check-out	10187	CPort0DOWNUSBCVbusLoadTest	74222465	just C O F	USBC Test	2021-02-20 08:41:36
	86		2021-02-19 10:15:00	FA-EE	FDKGJ45671	EE Analysis	10552	IMON_THD_N@FH_R_T_CH13	74387950	TBD	QT0A	2021-02-19 14:55:39
	70		2021-02-17 10:00:00	FA-Display	KL6NTH9YMQ	EE Analysis	10603	Horizontal Line (Dark)	74414428	TBD	FOS	2021-02-17 10:24:09
	38		2021-02-13 18:25:00	FA-Display	QC4WMK6CK0	EE Analysis	10313	White Spot	74306867	TBD	FOS	2021-02-16 09:30:56
	8		2021-02-10 13:47:00	Repair	MXQGQ90JNH	Unit-Done	10103	Back Camera Glass Scratch	88888888	Abnormal process	Install R-Camera	2021-02-12 11:07:15
	14		2021-02-11 13:31:00	Repair	QGM71TVKVL	Unit-Done	10147	JOI flex crack	88888888	Abnormal process	QT0A	2021-02-11 15:25:47
Page: 1/1 Total records:16												

URLSession

dataTask(historyURL)

Html

Parse html

Generate Excel FA report



# Applcon Draft

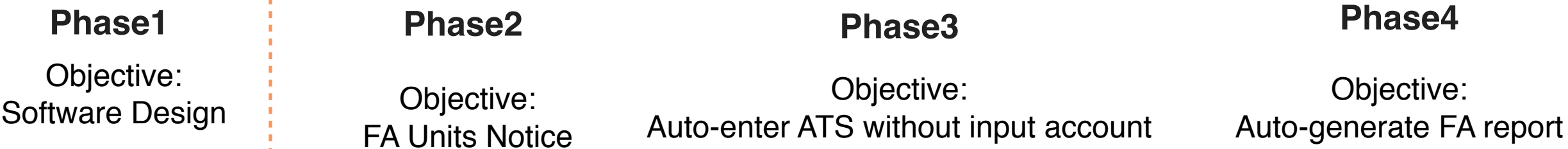


# 人力需求

- 一共需要4个人
- 1x 总体设计，应用框架实现（熟悉 Swift, Cocoa, Xcode）
- 1x 自动登录功能实现（熟悉 ATS, WebKit + Javascript）
- 1x 消息提醒功能实现（熟悉 NSTimer、AppIcon badge, NSUserNotification的使用）
- 1x FA报表实现（熟悉FA报告模版, XlsxReaderWriter, URLSession, 爬虫等技术）
-

# 考核方案

1. 上线给其他同事使用，获取同事的评价反馈。
2. 开会展示此项目的设计和实现，以及同事的反馈状况。
3. 领导评分。



Phase#	Action Item	Status Update	ETA