IOS期中專題

影片字幕APP

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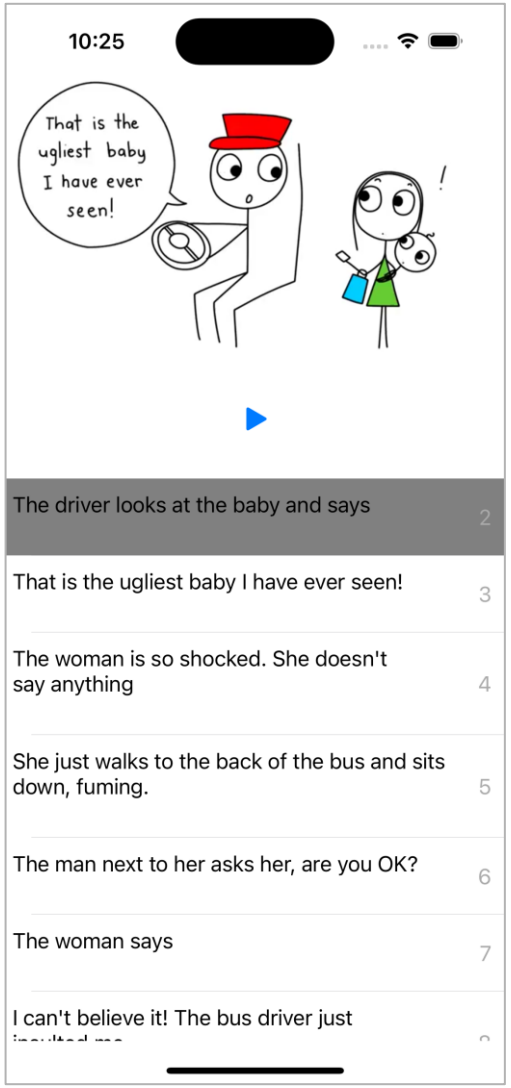
簡介

由於在以前的專案中有開發過影片字幕的API，因此想結合以前的開發成果，並與這次的期中專案做結合，實現類似在語言學習或電影中常見的字幕跟讀功能，同時使用AVPlayer讀取網路上的影片，並追蹤影片播放的進度，跳轉至相對應的字幕。

主要功能介紹

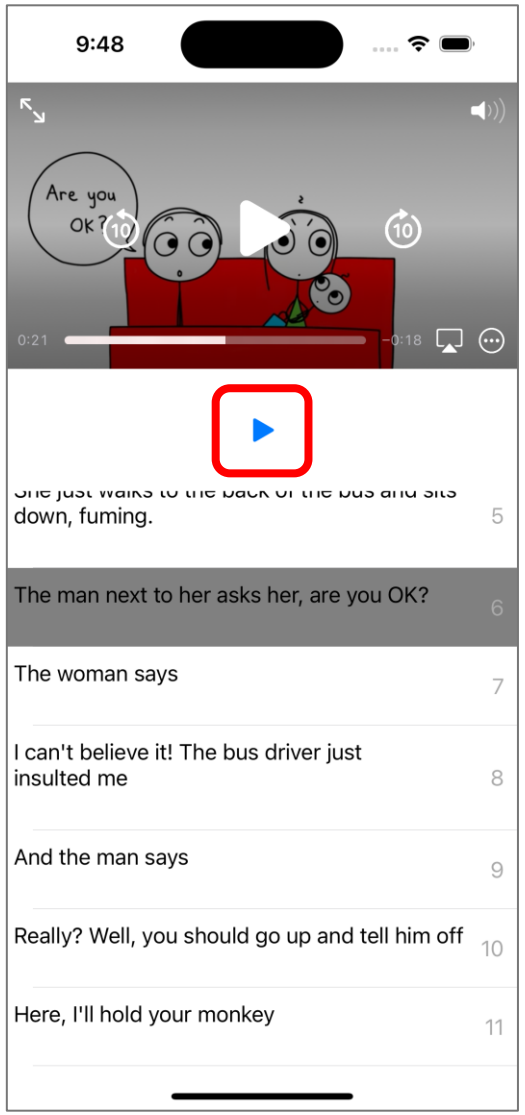
- 字幕跟隨影片進度
- 點選字幕影片跳轉至對應時間軸
- 影片暫停/播放功能
- 前10秒/後10秒跳轉
- 調整播放速度（0.5x ｜ 1.0x ｜ 1.25x ｜ 1.5x ｜ 2.0x）
- 全螢幕模式



主要程式碼介紹

- 播放按鈕設定

```
@IBAction func playBtnClick(_ sender: Any) {
    guard flag != nil else{
        print("太急了，還沒獲取到api資料")
        return
    }
    if(avPlayer?.rate == 0){
        avPlayer?.play()
        playBtn.setImage(UIImage(systemName: "pause.fill"), for: .normal)
    }else{
        avPlayer?.pause()
        playBtn.setImage(UIImage(systemName: "play.fill"), for: .normal)
    }
}
```



主要程式碼介紹

- 呼叫API

API格式

```
class videoApi : Codable{
    var result : result
}
class result : Codable{
    var audio : String
    var videoInfo : videoInfo
}
class videoInfo : Codable{
    var videourl : String
    var duration : Int
    var captionResult : captionResult
}
class captionResult: Codable{
    var results : [results]
}
class results : Codable{
    var captions:[captions]
}
class captions : Codable{
    var time : Int64
    var miniSecond: Double
    var content : String
}
```

URL

POST

BODY

```
func getApi(){
    let apiUrl = "https://api.italkutalk.com/api/video/detail"
    let url = URL(string: apiUrl)!
    var request = URLRequest(url: url)
    request.setValue("application/json", forHTTPHeaderField:
        "Content-Type")
    request.httpMethod = "POST"
    let json = ["guestKey": "44f6cfed-b251-4952-b6ab-34de1a599ae4",
                "videoID": "5edfb3b04486bc1b20c2851a",
                "mode": 0] as [String : Any]
    let jsonData = try? JSONSerialization.data(withJSONObject: json)
    request.httpBody = jsonData
    let task = URLSession.shared.dataTask(with: request){ data,
        response, error in
        if(error != nil){
            print("發送失敗", error!.localizedDescription)
        }
        else{
            DispatchQueue.main.async {
                do{
                    myVideoData = try
                        JSONDecoder().decode(videoApi.self, from: data!)
                    print("獲取api資料成功")
                    self.tableView.reloadData()
                    self.flag = true
                    self.startVideo()
                    self.avPlayer?.addPeriodicTimeObserver(forInterval:
                        CMTime(seconds: 1, preferredTimescale: 1),
                        queue: DispatchQueue.main) { [weak self] time in
                        self?.updateTableViewScrollPosition(for: time)
                    }
                }catch{
                    print("錯誤！:\(error)")
                }
            }
        }
    }
    task.resume()
}
```

收到API回傳後自動播放影片，
並監聽播放秒數

主要程式碼介紹

- tableView設定

```
func tableViewInit(){
    let cellNIB = UINib(nibName: "subTableViewCell", bundle: nil)
    tableView.register(cellNIB, forCellReuseIdentifier: "cell")
    print("tableView註冊完成!")
}
```

tableView註冊

```
func tableView(_ tableView: UITableView, numberOfRowsInSection
    section: Int) -> Int {
    return
        myVideoData?.result.videoInfo.captionResult.results
        [0].captions.count ?? 0
}
```

指定tableView顯示資料數

```
func tableView(_ tableView: UITableView, cellForRowAt indexPath:
    IndexPath) -> UITableViewCell {
    let cell = tableView.dequeueReusableCell(withIdentifier: "cell",
        for: indexPath) as! subTableViewCell
    cell.setCell(sub:
        myVideoData?.result.videoInfo.captionResult.results
        [0].captions[indexPath.row].content ?? "無字幕", index:
        indexPath.row)
    if indexPath == previousIndex {
            cell.backgroundColor = UIColor.gray
        } else {
            cell.backgroundColor = UIColor.white
        }
    return cell
}
```

填充tableeView cell內容

主要程式碼介紹

- tableView設定

設置tableView cell點擊事件

1. 影片跳轉至對應字幕顯示對應秒數
2. 設置點擊的cell樣式
3. 還原上一個顯示點擊的cell樣式

```
func tableView(_ tableView: UITableView, didSelectRowAt indexPath:
    IndexPath){

    updateTimer?.invalidate()
        updateTimer = nil
        // 停止滾動位置的更新
        shouldUpdateScrollPosition = false
        // 啟動計時器，在兩秒後恢復滾動位置的更新
        updateTimer = Timer.scheduledTimer(withTimeInterval: 2.0,
            repeats: false) { [weak self] _ in
            self?.shouldUpdateScrollPosition = true
        }

1.  let time =
        myVideoData?.result.videoInfo.captionResult.results
        [0].captions[indexPath.row].miniSecond ?? 0
    let targetTime = CMTime(seconds: time, preferredTimescale: 1000)
    avPlayer?.seek(to: targetTime)
    avPlayer?.play()
    playBtn.setImage(UIImage(systemName: "pause.fill"), for: .normal)
2.  tableView.reloadData()
    tableView.cellForRow(at: previousIndex ?? IndexPath(row: 0,
        section: 0))?.backgroundColor = UIColor.white
3.  tableView.cellForRow(at: indexPath)?.backgroundColor =
        UIColor.gray
    tableView.scrollToRow(at: indexPath, at: .top, animated: true)
    previousIndex = indexPath
}
```

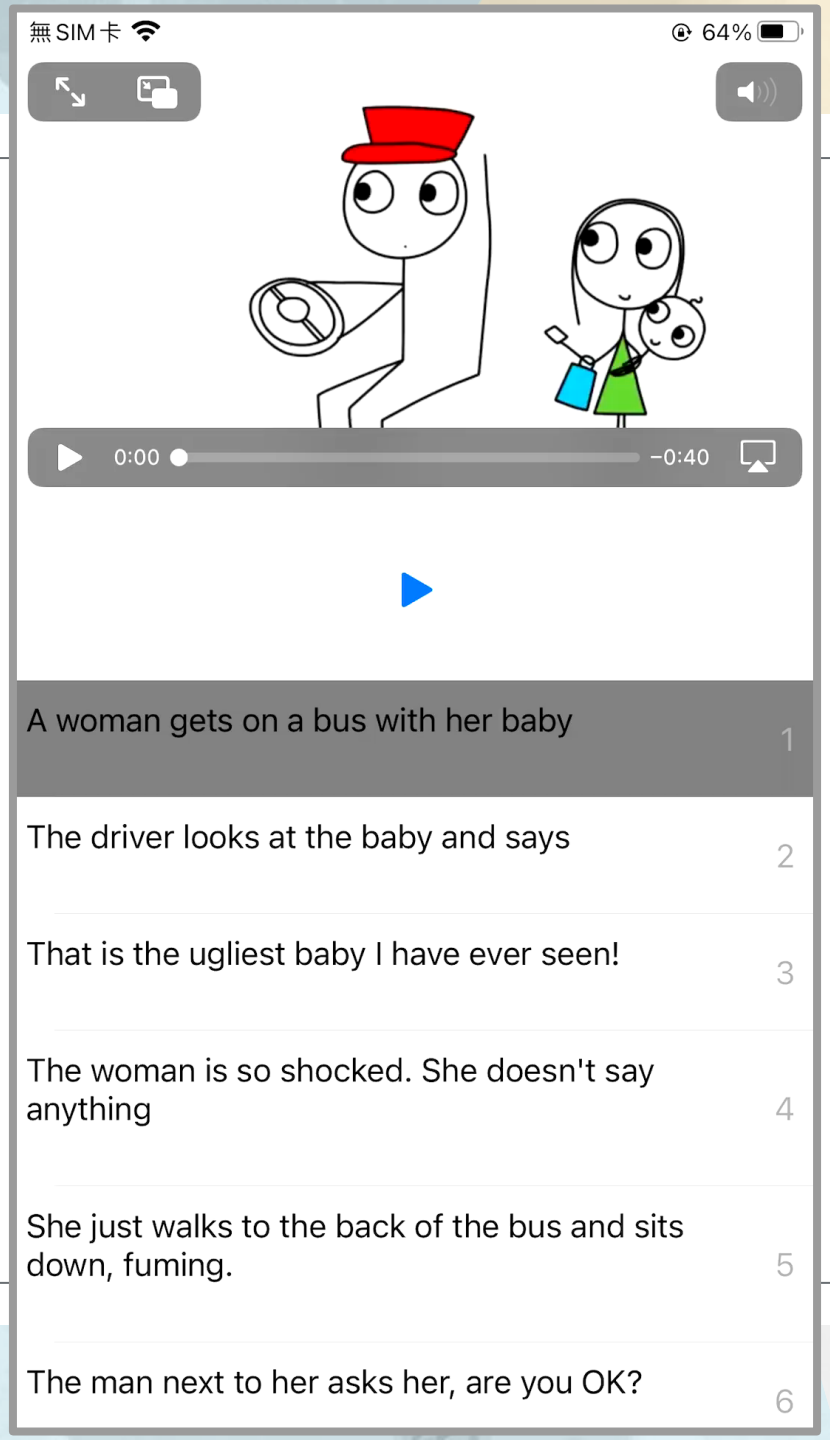
主要程式碼介紹

- 影片播放監聽器自動刷新
  func updateTableViewScrollPosition
  (for time: CMTime)

```
tableView.reloadData()

tableView.cellForRow(at: previousIndex ?? IndexPath(row: 0, section:
    0))?.backgroundColor = UIColor.white

tableView.cellForRow(at: indexPath)?.backgroundColor = UIColor.gray

tableView.scrollToRow(at: indexPath, at: .top, animated: true)
previousIndex = indexPath
```

```
    根據秒數計算需要滾動到的 cell 的 indexPath
for i in
    0..<myVideoData!.result.videoInfo.captionResult.results
    [0].captions.count {
1.  if
        myVideoData!.result.videoInfo.captionResult.results
        [0].captions[i].miniSecond > seconds {
        rows = i - 1
        break
    }
2.  //當影片到達最後時，將最後的cell移到最上面
    if i ==
        myVideoData!.result.videoInfo.captionResult.results
        [0].captions.count - 1{
        rows = i
    }
3.  //當影片播放到結束時，跳回第一個cell並且影片重新播放
    if seconds >= Double(myVideoData!.result.videoInfo.duration - 1){
        rows = 0
        avPlayer?.seek(to: CMTime(seconds: 0, preferredTimescale: 1))
        avPlayer?.play()
    }

}
```

DEMO


無SIM卡
64%
0:00
-0:40
A woman gets on a bus with her baby
1
The driver looks at the baby and says
2
That is the ugliest baby I have ever seen!
3
The woman is so shocked. She doesn't say anything
4
She just walks to the back of the bus and sits down, fuming.
5
The man next to her asks her, are you OK?
6

THANK YOU