

# DEVELOPMENT OF AN ANDROID SUPPORT APP FOR FIELD AGENTS

*Presented in fulfillment of the requirements for the degree of*  
BACHELOR OF BUSINESS COMPUTING

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# Summary

- ▶ Introduction
- ▶ The company
- ▶ The internship
- ▶ Android
- ▶ The project : Ethias Prevention
  - ▶ Non-functional requirements
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- ▶ Comments and suggestions
- ▶ Conclusion

# Introduction

- ▶ Internship
  - ▶ 14 weeks
  - ▶ First experience in the professional world
  - ▶ Thesis
  - ▶ Djm digital
  - ▶ Android app development
  - ▶ Project : Ethias Prevention





► 4 activities :



Web development



Mobile development



e-Marketing

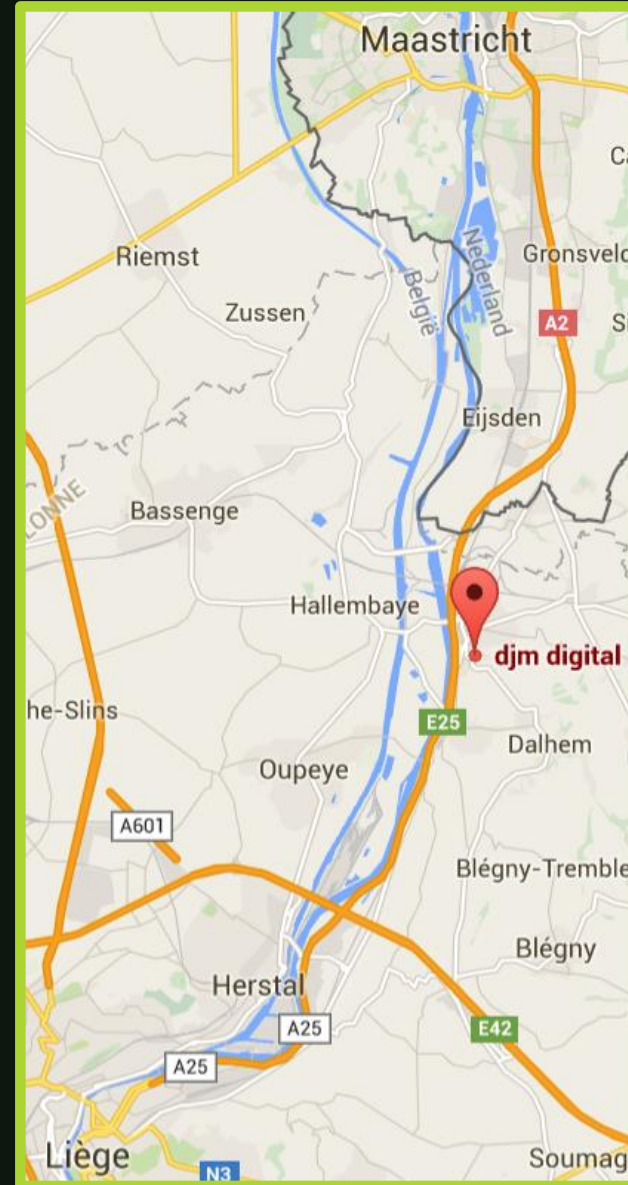


Consultancy





- ▶ Located in Visé
- ▶ 16 people
- ▶ 4 poles :
  - ▶ Design/graphics
  - ▶ Development
  - ▶ Project management
  - ▶ Administration



# The internship

- ▶ Android app development
- ▶ 14 weeks, 38 hours/week ~ 8 hours/day
  - ▶ 2 weeks → Introductory task : t411 app
  - ▶ 12 weeks → Main project : Ethias Prevention
    - ▶ Continue/finish it while adapting it to the new Android technologies (Material design, MVVM, data binding)

# Android

- ▶ History :
  - ▶ Android Inc. in 2003
  - ▶ Sold to Google in 2005
  - ▶ First device in 2008
  - ▶ Today : Android Marshmallow (6.0) and soon, Android N
  - ▶ Android Wear, Android TV, Android Auto
- ▶ Based on Linux, written in Java



# Ethias Prevention

- ▶ To assist Ethias field insurers in creating reports
  - ▶ Damages, incidents, audits
- ▶ No need for a notebook, a pen, a camera, etc.
- ▶ Remote DB for centralization and consultation
- ▶ PDF (to save/print & send by email)



# Non-functional requirements

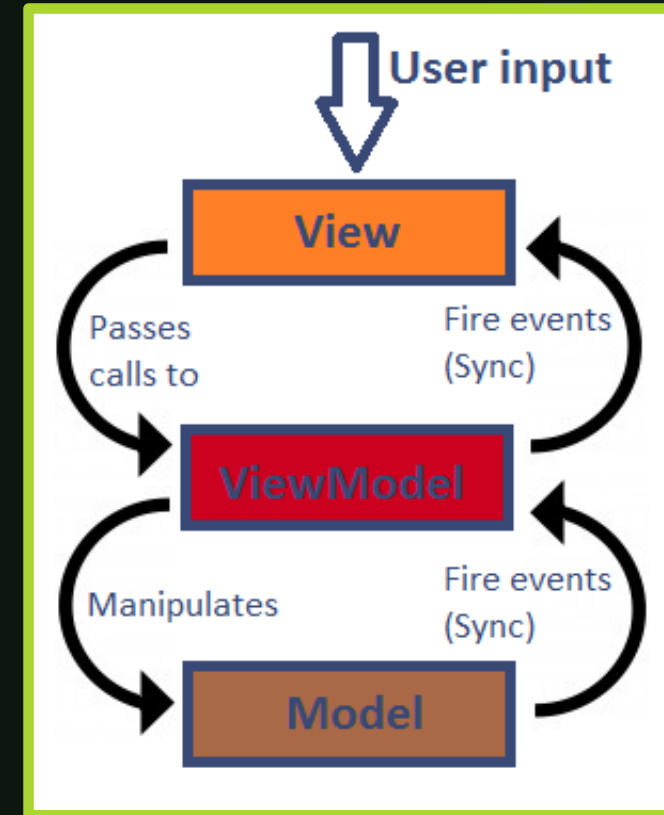
- ▶ Adaptable, ergonomic, intuitive, effective, usable offline, easily obtainable
  - Material design



# Non-functional requirements

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- ▶ Easily testable and modifiable
  - MVVM design pattern
  - The Data Binding library



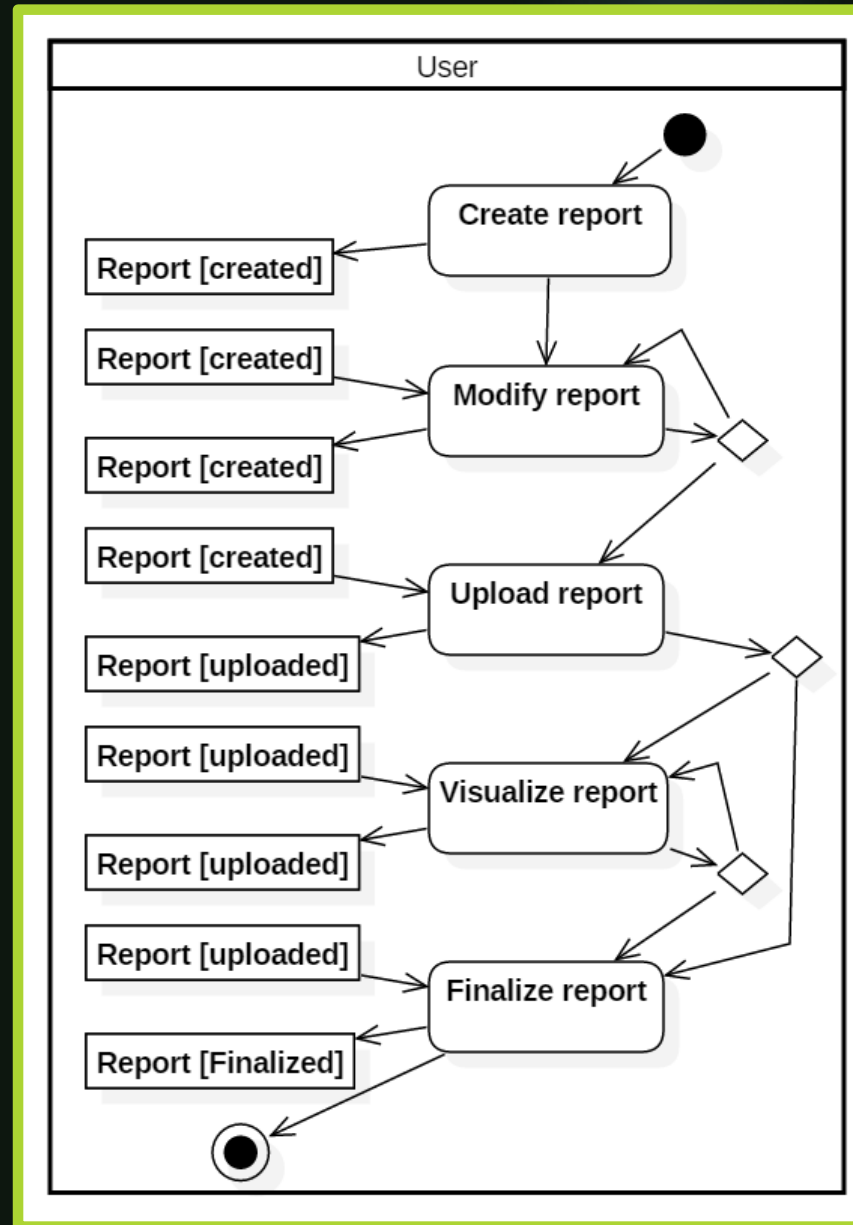
# Analysis

## ► Activity diagram

→ 1 business object

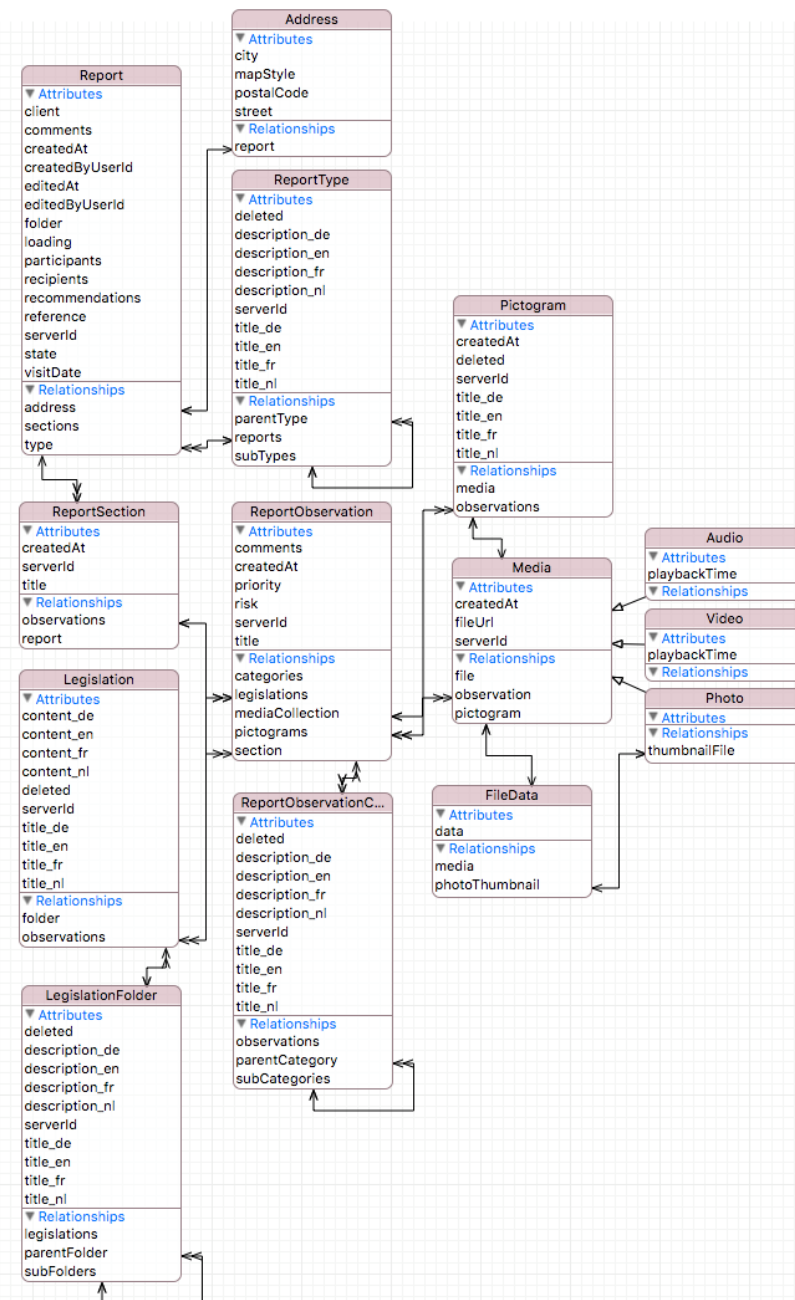
→ 5 use cases

→ 3 states



# Analysis

## ► Class diagram

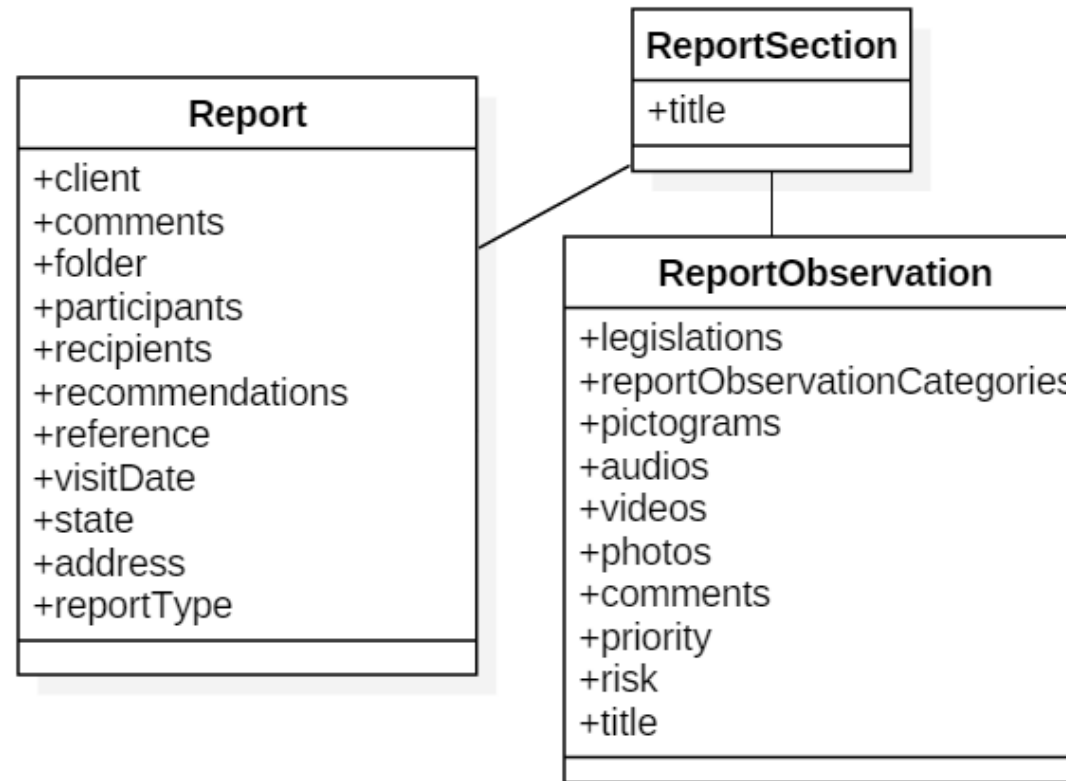




# Analysis

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## ► Simplified class diagram



# Guided tour

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## ▶ Login page



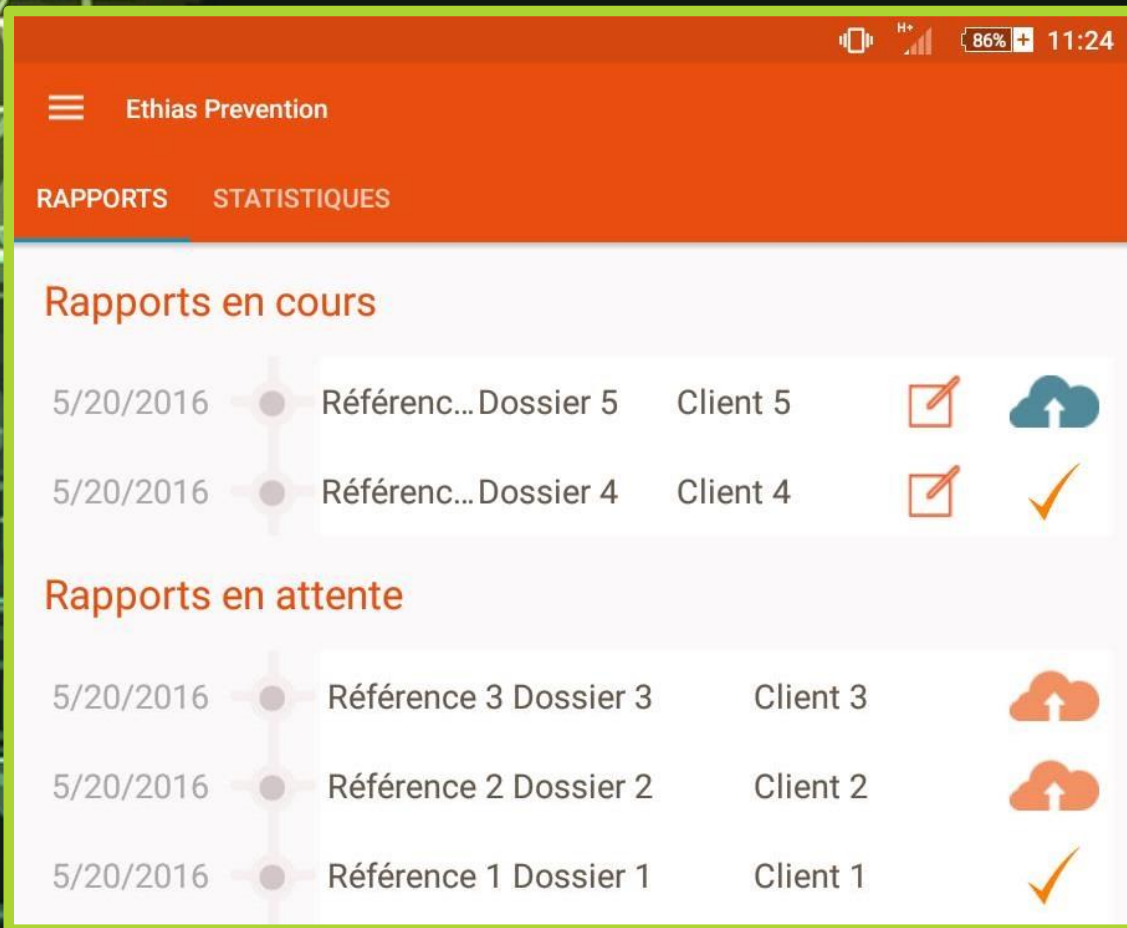
- Login
- Material design
- Languages menu



- Auto login
- Auto fill-in
- Forgotten password

# Guided tour

## ► Homepage



- Modify report
- Upload it
- Visualize it
- Finalize it
- Material design

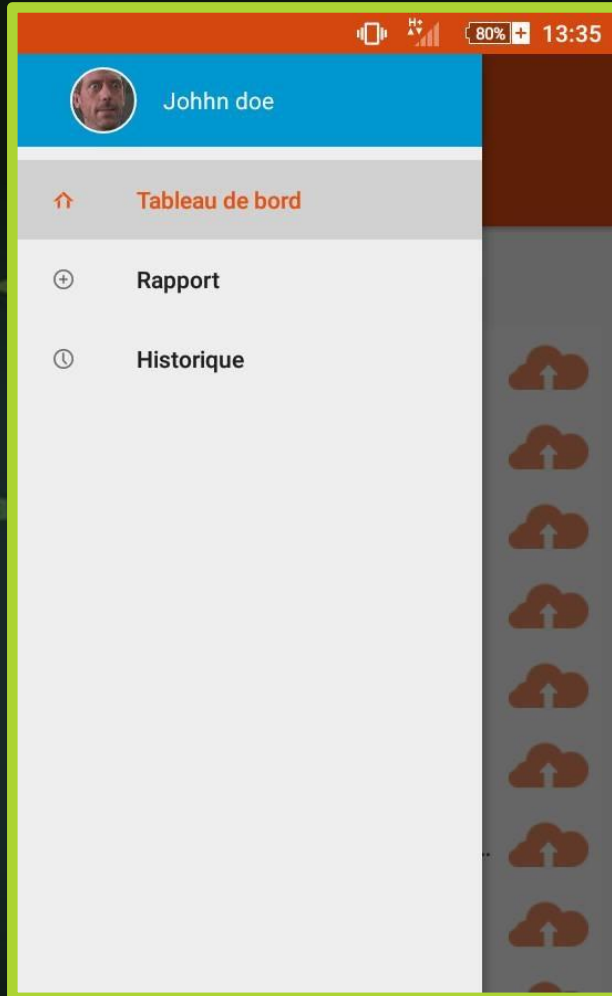


- Statistics
- Sticky Headers

# Guided tour

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## ▶ Menu



- Swipe
- Hamburger button
- Access to :
  - homepage
  - report creation
  - history
- Material design



- Disconnection



# Guided tour

## ► Report creation, step 1



- Helps the user :
- Date
- Google Maps
- Mission type
- Save
- Add sections



/

The screenshot shows the 'Ethias Prevention' mobile application interface. The top bar is orange with the app name and navigation icons. Below the bar, there are two tabs: 'DONNÉES GÉNÉRALES' (selected) and 'OBSERVATIONS ET RECOMMANDATIONS'. The main form contains several sections, each with a title and a text input field:

- Dossier**: Nom du dossier
- Référence**: Référence du dossier
- Client**: Nom du client
- Date de visite**: 5/20/2016
- Type de mission**: Veuillez sélectionner un type de mis.. (dropdown menu)
- Lieu**:
  - Rue
  - C.P. and Ville (separate fields)
  - Google Maps (a map showing the area around Brussels, Leuven, and Ghent)
- Participants**: Liste des participants
- Destinataires**: Liste des destinataires

# Guided tour

## ► Report creation, step 2

The screenshot shows a mobile application interface for 'Ethias Prevention'. At the top, there is a status bar with icons for signal, battery (85%), and time (11:26). Below this is a navigation bar with a hamburger menu icon, the title 'Ethias Prevention', and two circular icons: one with a checkmark and one with a plus sign. The main content area has two tabs: 'DÉTAILS GÉNÉRALES' and 'OBSERVATIONS ET RECOMMANDATIONS'. The 'OBSERVATIONS ET RECOMMANDATIONS' tab is active. Under this tab, there are two sections: 'Recommandations' with the prompt 'Entrez vos recommandations générales' and a text input field, and 'Commentaires' with the prompt 'Entrez vos commentaires généraux' and a text input field.

# Guided tour

## ► Report creation, sections



- Helps the user :
  - Types
  - Risk & Priority
- Add observations



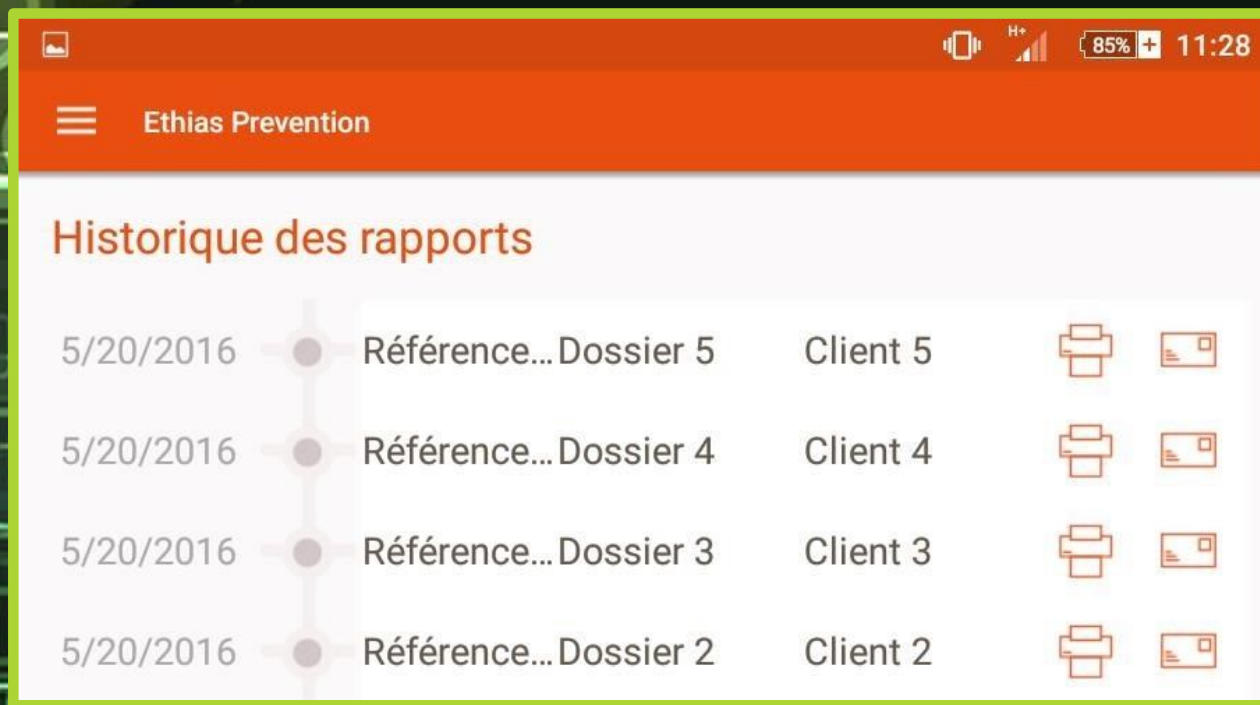
- Pictograms
- Legislations
- Videos
- Pictures
- Audio files









The screenshot shows the 'Ethias Prevention' mobile app interface. At the top, there's a red header with a menu icon, the title 'Ethias Prevention', and a status bar showing 85% battery and 11:27. Below the header, there are two tabs: 'OBSERVATIONS ET RECOMMANDATIONS' and 'NOUVELLE SECTION'. The 'NOUVELLE SECTION' tab is active. The form below has a title 'Titre de la section' and a label 'Section'. The form fields are: 'Sujet' (text input), 'Type(s)' (dropdown menu), 'Ajouter des pictogrammes' (text input), 'Législation(s)' (text input), 'Observation' (text input), 'Risque' (checkbox), and 'Priorité' (checkbox). A blue circular button with a plus sign is at the bottom right.

# Guided tour

## ► History

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Ethias Prevention				
Historique des rapports				
5/20/2016	●	Référence... Dossier 5	Client 5	 
5/20/2016	●	Référence... Dossier 4	Client 4	 
5/20/2016	●	Référence... Dossier 3	Client 3	 
5/20/2016	●	Référence... Dossier 2	Client 2	 



- Visualize report
- Load a PDF
- Print it
- Send it by email



- Sticky Headers



# Comments and suggestions

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- ▶ The app :
  - ▶ Useful to Ethias field agents
    - ▶ Respects the non-functional requirements
  - ▶ Complete in regards of its scope
  - ▶ Not over yet
  - ▶ Embedded desktop & Access to Ethias intranet?

# Comments and suggestions

- ▶ The development :
  - ▶ Professional but friendly atmosphere
  - ▶ Perfect introductory task
  - ▶ Corporate communication?
- ▶ Android open source...
- ▶ MVVM...

# Conclusion

- ▶ 2+12 weeks
- ▶ Still some work to do
- ▶ Pleasant first contact with the professional world
- ▶ Organization of businesses
- ▶ A look toward the future

Thank you.