

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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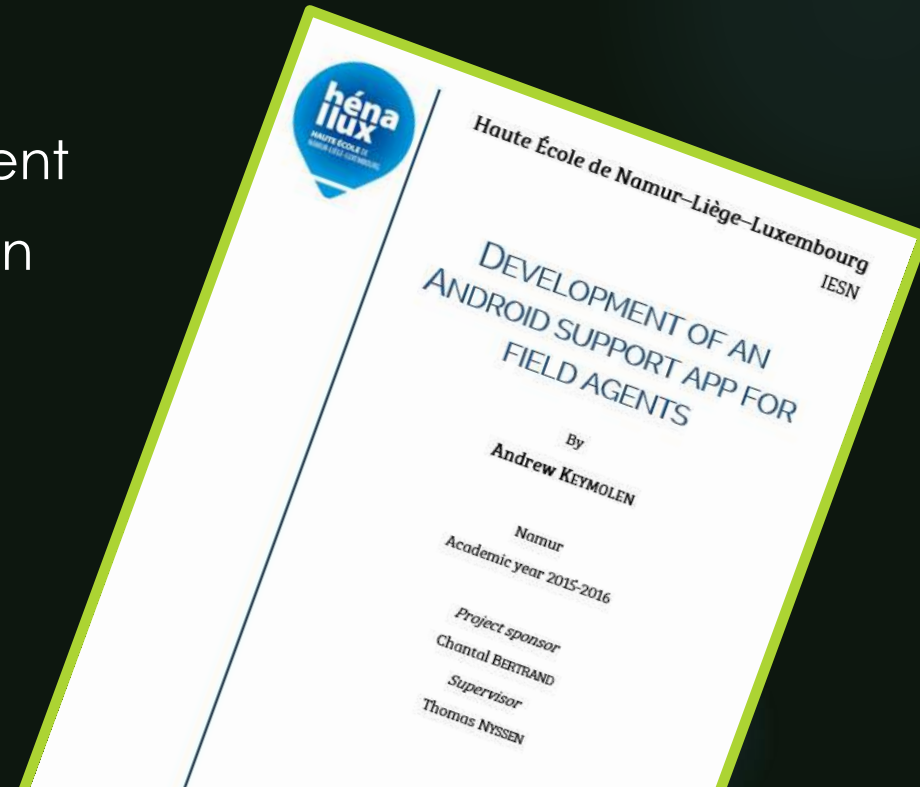
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Summary

- ▶ Introduction
- ▶ The company
- ▶ The internship
- ▶ Android
- ▶ The project : Ethias Prevention
 - ▶ Non-functional requirements
 - ▶ Analysis
 - ▶ Guided tour
- ▶ 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



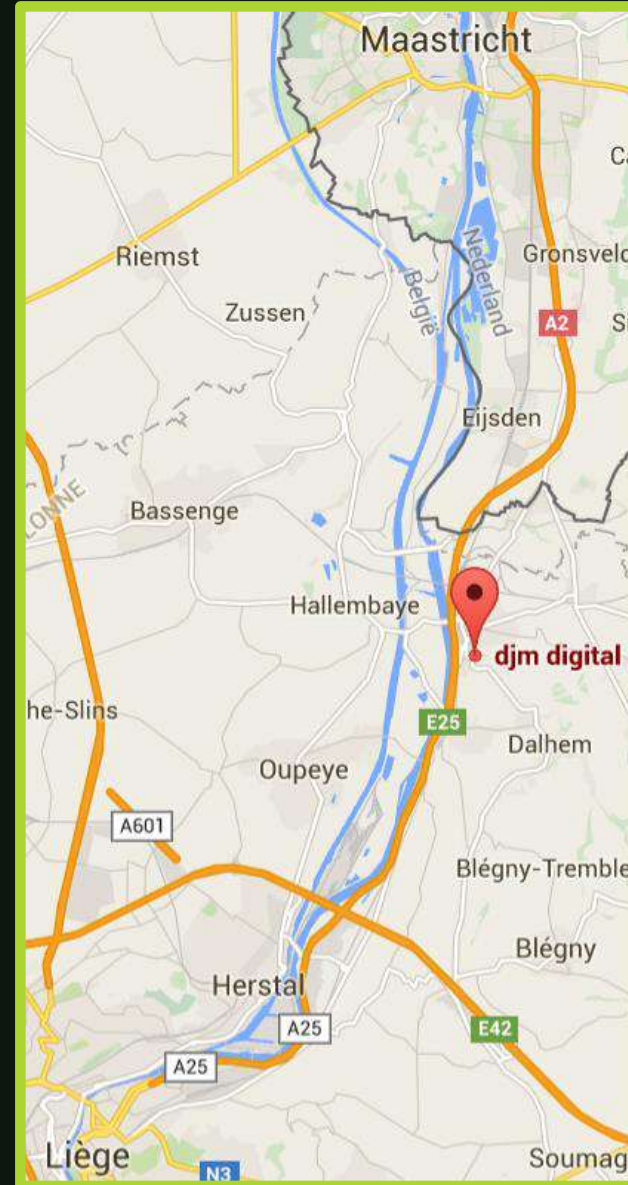
e-Marketing



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

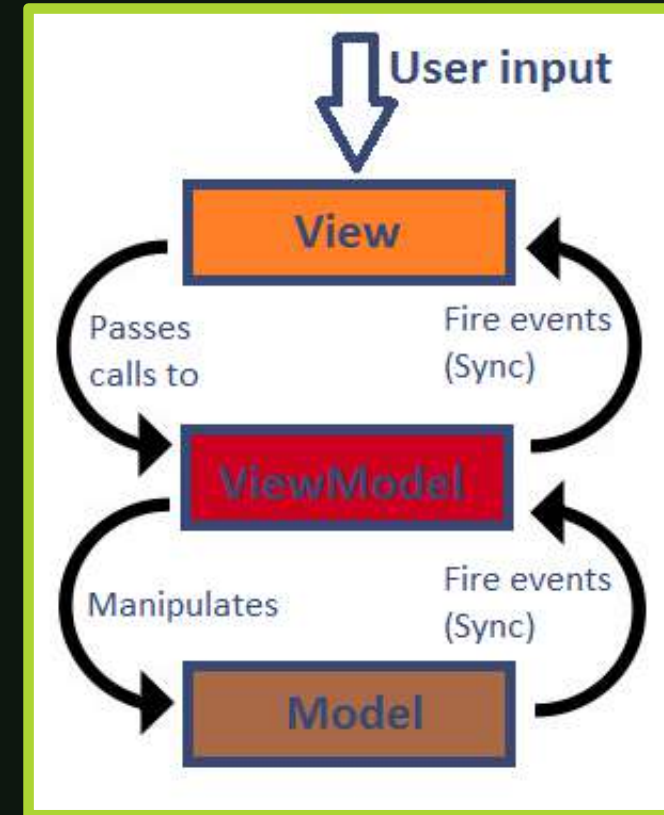
- ▶ Adaptable, ergonomic, intuitive, effective, usable offline, easily obtainable
 - Material design



Non-functional requirements

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



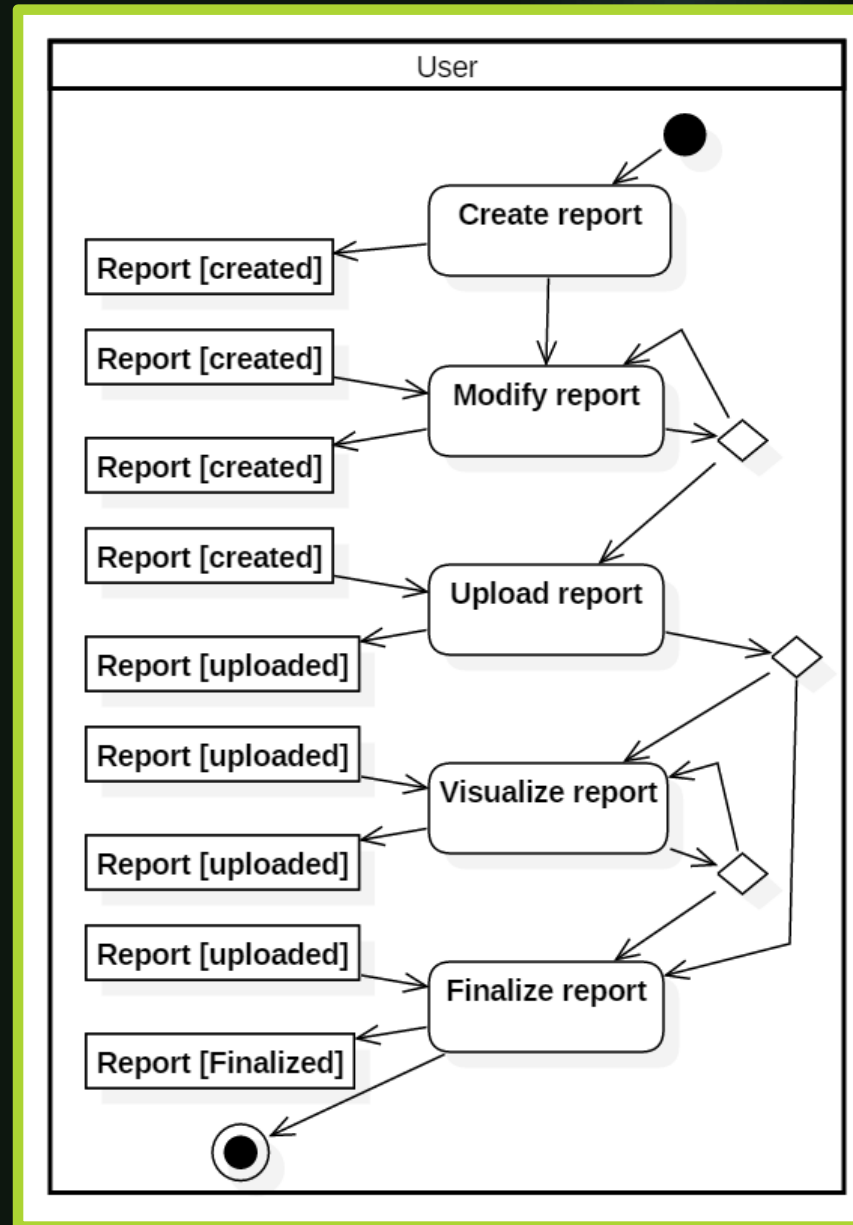
Analysis

► Activity diagram

→ 1 business object

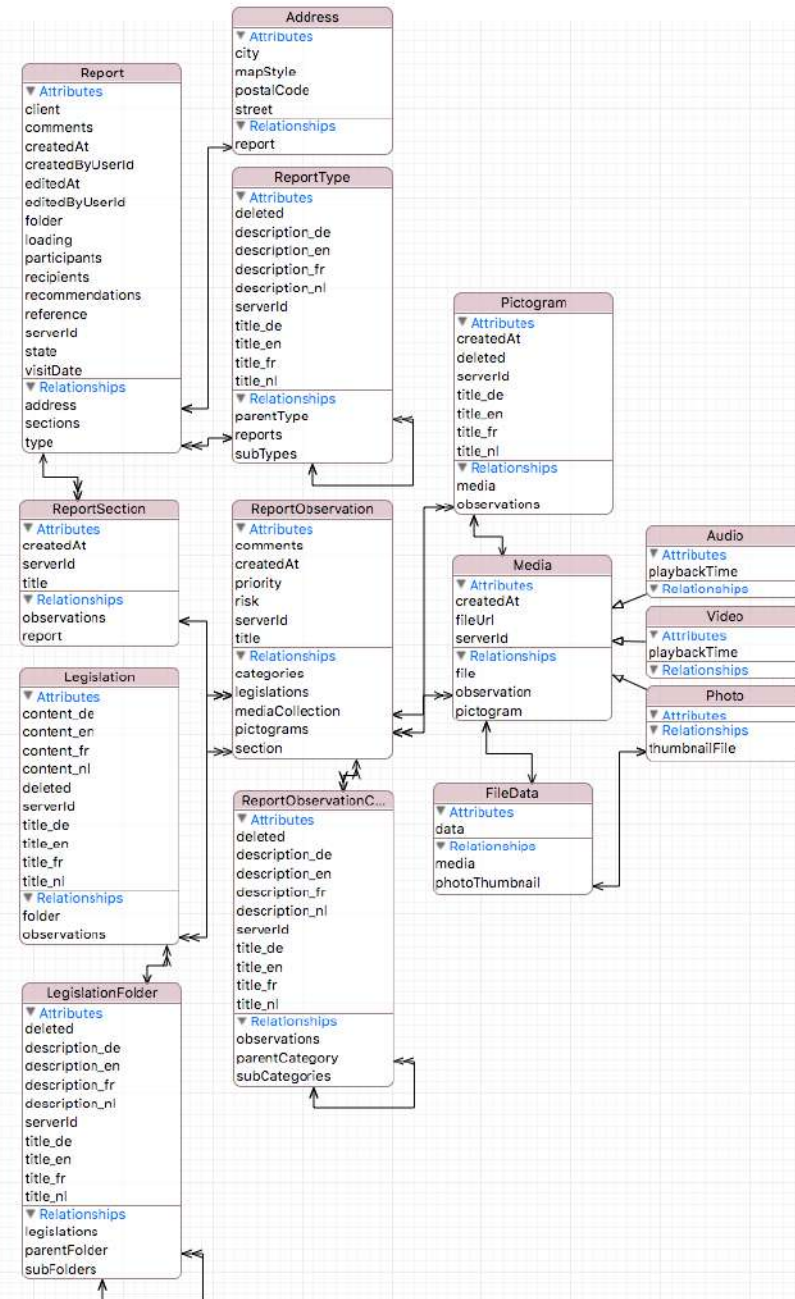
→ 5 use cases

→ 3 states



Analysis

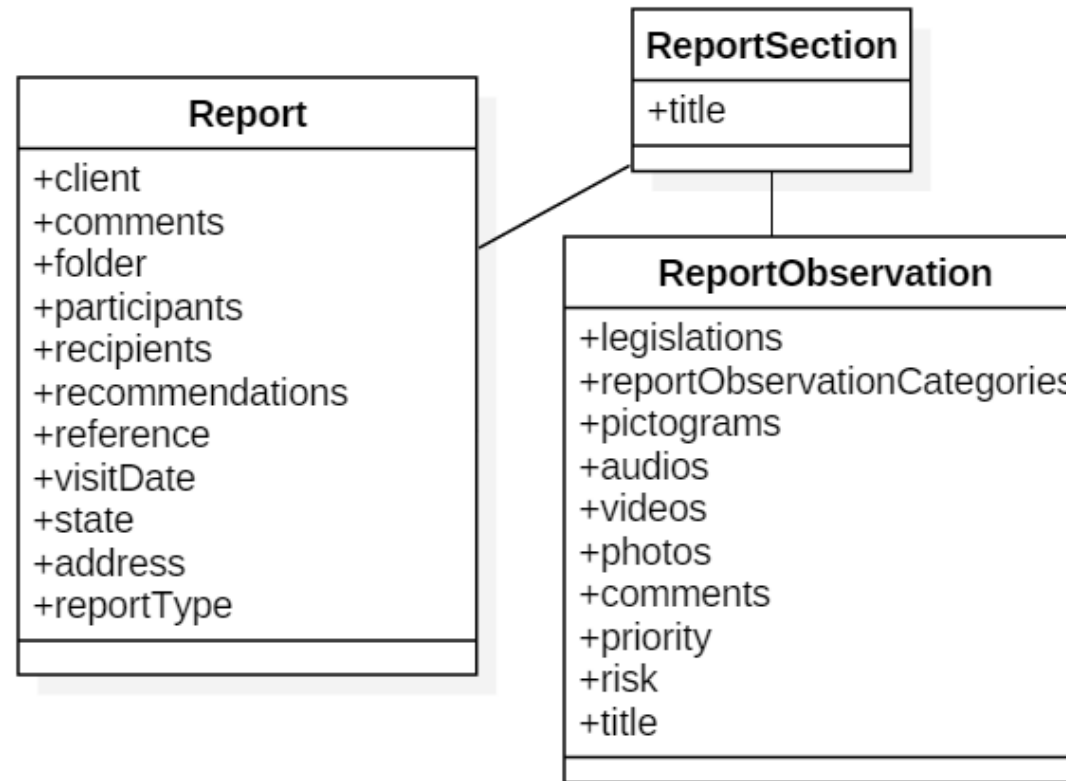
► Class diagram



Analysis

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► Simplified class diagram



Guided tour

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▶ Login page



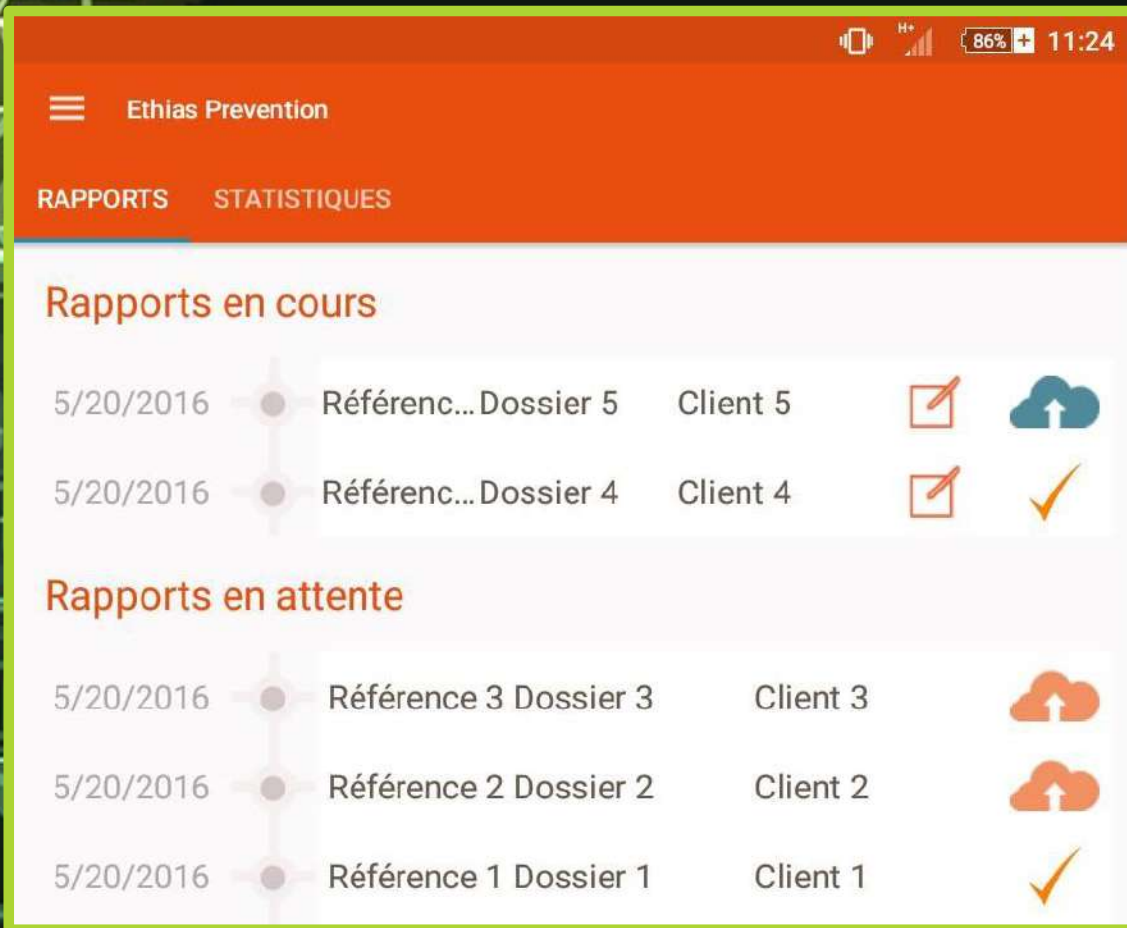
- Login
- Material design
- Languages menu



- Auto login
- Auto fill-in
- Forgotten password

Guided tour

► Homepage



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

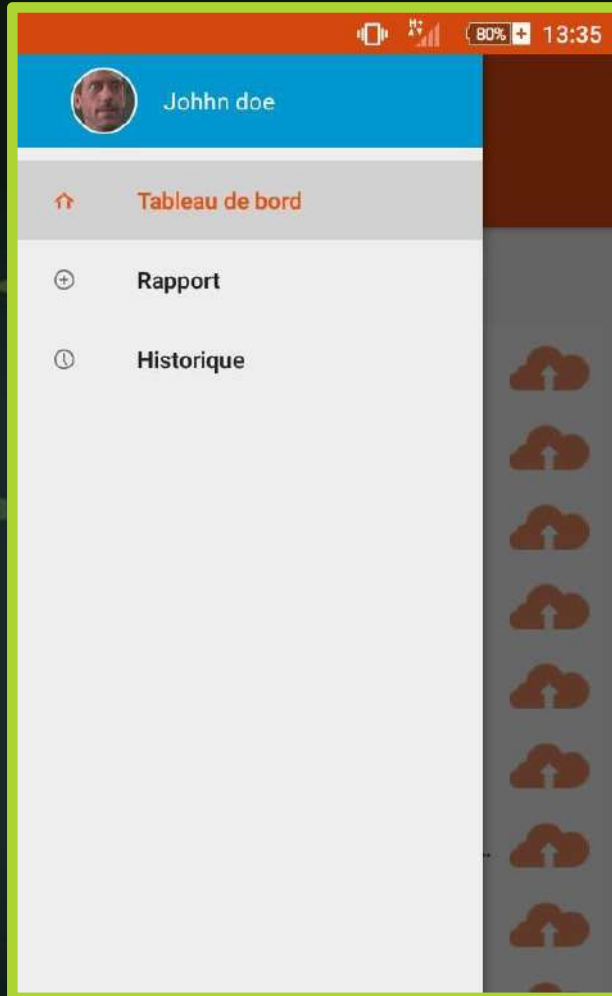


- Statistics
- Sticky Headers

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



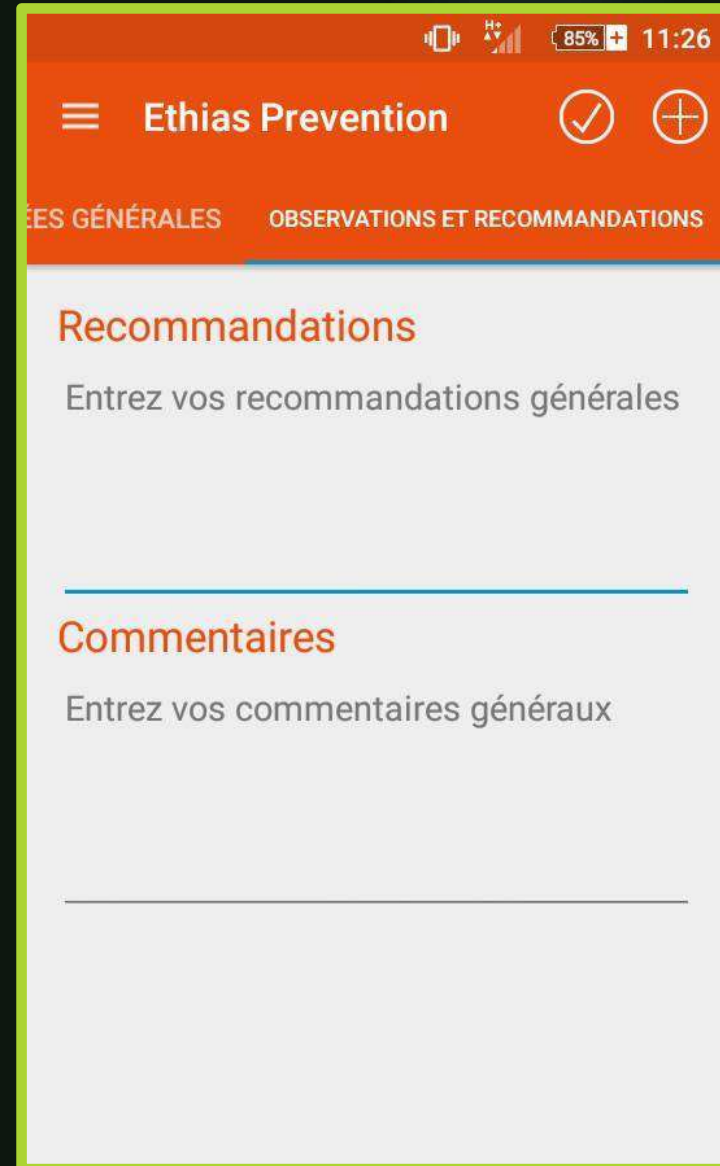
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The screenshot shows the 'Ethias Prevention' mobile application interface. At the top, there is a red header bar with the app name and navigation icons. Below the header, there are two tabs: 'DONNÉES GÉNÉRALES' (selected) and 'OBSERVATIONS ET RECOMMANDATIONS'. The main form is titled 'Dossier' and contains several sections with input fields:

- Nom du dossier**: A text input field.
- Référence**: A section header.
- Référence du dossier**: A text input field.
- Client**: A section header.
- Nom du client**: A text input field.
- Date de visite**: A section header.
- 5/20/2016**: A date input field.
- Type de mission**: A section header.
- Veuillez sélectionner un type de mis..**: A dropdown menu.
- Lieu**: A section header.
- Rue**: A text input field.
- C.P.** and **Ville**: Two text input fields.
- Google Maps**: A map view showing the location of Brussels and Leuven.
- Participants**: A section header.
- Liste des participants**: A text input field.
- Destinataires**: A section header.
- Liste des destinataires**: A text input field.

Guided tour

► Report creation, step 2



The screenshot displays the 'Ethias Prevention' mobile application interface. At the top, a status bar shows signal strength, 85% battery, and the time 11:26. Below this is an orange header bar with a hamburger menu icon, the text 'Ethias Prevention', and two circular icons (a checkmark and a plus sign). A secondary orange bar contains two tabs: 'DÉTAILS GÉNÉRALES' and 'OBSERVATIONS ET RECOMMANDATIONS', with the latter being the active tab. The main content area is white and divided into two sections. The first section, titled 'Recommandations' in orange, includes the prompt 'Entrez vos recommandations générales' and a large, empty text input field. The second section, titled 'Commentaires' in orange, includes the prompt 'Entrez vos commentaires généraux' and a large, empty text input field.

Guided tour

► Report creation, sections



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



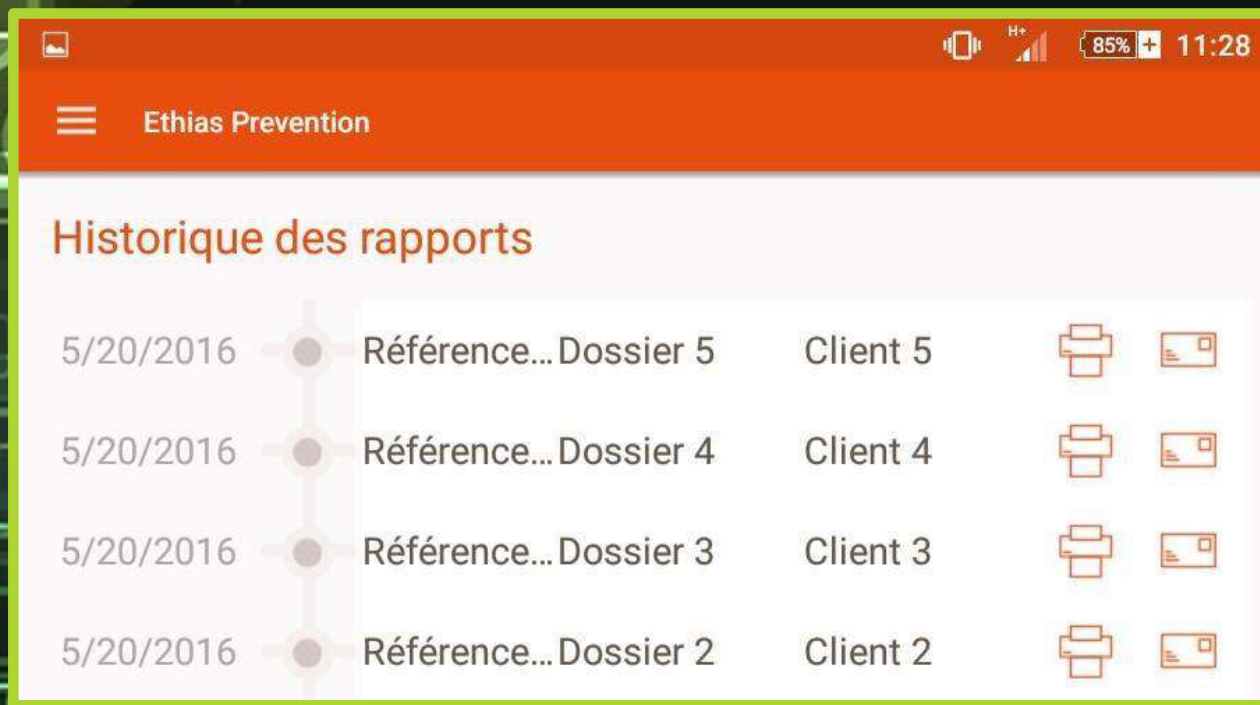
- Pictograms
- Legislations
- Videos
- Pictures
- Audio files









The screenshot shows the 'Ethias Prevention' mobile application interface. At the top, there's a red header bar with a menu icon, the title 'Ethias Prevention', and a checkmark icon. Below the header, there are two tabs: 'OBSERVATIONS ET RECOMMANDATIONS' and 'NOUVELLE SECTION'. The main content area is titled 'Titre de la section' and 'Section'. It contains a form with several fields: 'Sujet' (Subject), 'Type(s)' (Type(s)), 'Ajouter des pictogrammes' (Add pictograms), 'Législation(s)' (Legislation(s)), 'Observation' (Observation), 'Risque' (Risk), and 'Priorité' (Priority). Each field has a corresponding input area. At the bottom right, there is a blue circular button with a white plus sign.

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.