**TRAINING PROGRAMME AND AGENDA**

**Programme details:**

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| VET Field | IT |
| Training Title | Mobile Applications |
| Training length | 2 weeks (60 hours) |
| Cultural programme length | 20 hours |
| Spanish course length  | 10 hours |
| Dissemination activities length | 2 hours |
| Number of participants | 16 |
| Number of accompanying persons | 2 |

**Annexes:**

**Annex I: Spanish course programme**

**Annex II: Dissemination Plan**

**Annex III: Cultural programme**

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|  | **TIME** | **TRAINING MODULE** | **Number of hours** |
| **TASKS** | **LEARNING OUTCOMES** |
| **DAY 1 Sunday** | **TRANSPORTATION OF THE PARTICIPANTS FROM THE TARGETED AIRPORT TO SEVILLE****ACCOMODATION (ACCORDING TO THE FORWARDED INFORMATION ON THE FLIGHT)** |
| **DAY 2 Monday** | **9:00 – 11:00** | * Welcome session and orientation walk around trainees residence’s neighborhood.
 | **1 hour** |
| * Dissemination meeting – dissemination form of the project and the outcomes.
 | **1 hour** |
| **11:00 – 13:30** | **Module 1: INTRODUCTION** |
| 1. Initial welcome and showing around the VET school facilities.
2. Training Programme induction.
 | * Trainee knows and understands health & safety regulations.
* Trainee is able to introduce himself to the tutor – knows the learning outcomes which are going to be acquired by him/her during the training.
 | **2,5 hours** |
| **15:00 – 20:30** | **Module 2: DEVELOPMENT ENVIRONMENT** |
| 1. Installing configuring IDE (Eclipse).
2. Installing and configuring software of Emulation on Virtual Mobile Devices (Genymotion).
3. Creating the first Android project "Hello World!".
 | * Trainee knows to install and configure the Eclipse development environment for the development of mobile apps with Android.
* Trainee emulates virtual mobile devices, in which he can run apps.
* Trainee creates projects in Android.
 | **2,5 hours** |
| **Module 3: ANDROID PROGRAMMING** |
| 1. Implementing navigation between two screens of the app by explicit Intent, passing the

data from one screen to another.1. Using implicit Intent for the launching of actions that are external to the app.
2. Using Intent-filter for the execution of actions with our own app.
3. Showing information with Logcat and Toast in the user interface.
 | * Trainee implements applications with several screens which allow to launch external actions that are resolved by other applications like the action of share, send, call by phone, etc.
* Trainee reports information by console and by the user interface.
 | **3 hours** |
| **DAY 3 Tuesday** | **9:00 – 10:00** | * Practice-oriented Spanish course aimed at developing sector-related vocabulary and day to day expressions (initial evaluation test).
 | **1 hour** |
| **15:00 – 20:30** | **Module 4: INTERFACES DEVELOPMENT** |
| 1. Design of an interface with the different types of Layouts: Relative Layout, LinearLayout, TableLayout.
2. Forms design.
3. Resources in Android (Drawable, Assets).
4. Internationalization of the app.
5. Menus design (of options, contextual).
 | * The trainee knows the difference between the different layouts and uses the most appropriate one in each case.
* Trainee designs forms in Android, distinguishing between the different components: spinner, checkboxes, radio buttons, buttons, etc.
* Trainee designs graphic components (icons, images) that are used in the app.
* Trainee designs applications that can support several languages.
* Trainee designs menus in a mobile application.
 | **5,5 hours** |
| **DAY 4 Wednesday** | **9:00 – 11:00** | * Practice-oriented Spanish course aimed at developing sector-related vocabulary and day to day expressions.
 | **2 hours** |
| **15:00 – 20:30** | **Module 5: INTERFACES DEVELOPMENT** |
| 1. Designing a personalized ListView by an Adapter and generic.
2. Designing a personalized GridView.
 | * Trainee implements different types of organizational structures of the application: lists and grid.
 | **5,5 hours** |
| **DAY 5 Thursday** | **9:00 – 11:00** | * Practice-oriented Spanish course aimed at developing sector-related vocabulary and day to day expressions.
 | **2 hours** |
| **15:00 – 20:30** | **Module 6: ANDROID PROGRAMMING** |
| 1. Programming navigation: Navigation Drawer (left and right).
2. Programming tabs (fixed and with scroll). Both methods using Fragments.
 | * Trainee designs Android navigation patterns by menus.
 | **5,5 hours** |
| **DAY 6 Friday** | **9:00 – 11:00** | * Practice-oriented Spanish course aimed at developing sector-related vocabulary and day to day expressions.
 | **2 hours** |
| **15:00 – 20:30** | **Module 7: DATABASES** |
| 1. Learning databases in Android.
2. Designing a relational database in Android, using the ORM greenDAO.
3. Implementing a CRUD app with greenDAO.
 | * Trainee designs and manages relational databases in Android.
 | **5,5 hours** |
| **DAY 7****Saturday** | **9:00 – 17:00** | **Cultural Programme** |
| 1. Cultural one-day excursion.
 | * Trainee knows the general historical background of the visited city.
* Trainee is able to pin point and name the most important monuments of the visited city.
 | **8 hours** |
| **DAY 8****Sunday** | **9:00 – 17:00** | **Cultural Programme (Free time)** |
| 1. Free cultural activities, for example:
2. Cathedral & Giralda.
3. Hospital de los Venerables.
4. Flamenco show in La Carboneria.
 | * Trainee knows the Spanish customs and traditions.
* Trainee is able to pin point and name the most important monuments of Seville.
* Trainee knows the Flamenco dance.
 | **8 hours** |
| **DAY 9 Monday** | **9:00 – 12:00** | * Practice-oriented Spanish course aimed at developing sector-related vocabularyand day to day expressions.
 | **2 hours** |
| * Dissemination meeting: checking on the progress of the work groups.
 | **1 hour** |
| **15:00 – 20:30** | **Module 8: MULTIMEDIA PROGRAMMING** |
| 1. Taking pictures with the camera (by Intent). The implementation of our own camera using a third party project will be seen as well.
2. Implementation of a personalized camera, with use of the flash and other properties.
 | * The trainee manages the photo capture with the mobile device camera.
 | **5,5 hours** |
| **DAY 10 Tuesday** | **9:00 – 10:00** | * Practice-oriented Spanish course aimed at developing sector-related vocabulary and day to day expressions final exam.
 | **1 hour** |
| **15:00 – 20:30** | **Module 9: ANDROID PROGRAMMING** |
| 1. Service in Android, applied to a music player.
2. Broadcast Receiver applied to multimedia elements.
 | * Trainee applies Android specific elements to implement services in the background.
 | **2 hours** |
| **DAY11****Wednesday** | **9:00 – 12:00** | * Cultural activity organized by euroMind.
 | **3 hours** |
| **15:00 – 20:30** | **Module 10: Multimedia programming** |
| 1. Implementation of GPS antenna and geolocation.
2. Implementation of Google Maps in Android: Markers, events, InfoWindow (personalized), polygons, etc.
3. Implementation of Map in Fragment (with Navigation Drawer).
 | * The trainee implements maps and geolocation services in Android with Google Maps.
 | **5,5 hours** |
| **DAY 12 Thursday** | **9:00 – 12:00****15:00 – 20:30** | **Module 11: Multimedia programming** |
| 1. Implementing threads in Android.
2. Communicating with servers with RESTFul API (an own server will be used). Differentiating between access to open API and API with token-based authentication.
3. Using PARSE service.
 | * Trainee implements threads and executions in the background.
* Trainee interconnects the app with Internet databases, through the use of REST API.
 | **8 hours** |
| **DAY 13 Friday** | **9:00 – 12:00** | * Cultural activity organized by euroMind.
 | **3 hours** |
| **15:00 – 20:30** | **Module 12: ANDROID PROGAMMING** |
| 1. Export app to an .apk.
2. Publicating and managing the app in Google Play.
3. Designing and implementing advertising banner in apps with AdMob.
 | * Trainee exports developed applications.
* Trainee distributes mobile applications on the Internet.
* Trainee implements advertising in a mobile app.
 | **5,5 hours** |
| **DAY 14 Saturday** | **Goodbye & Departure** |