



**UNIVERSIDADE DE BRASÍLIA  
FACULDADE DE TECNOLOGIA  
ENGENHARIA DE PRODUÇÃO  
PROJETO DE SISTEMAS DE PRODUÇÃO 2**

GABRIEL DE LANNA FIUZA CURI GARCIA - 190013214  
GABRIEL RODRIGUES AFONSO SILVA - 190120134  
LUIZA BARRETO DO ESPÍRITO SANTO SILVA - 202043620  
MATHEUS BEGUITO MARTINEZ - 190093315  
PEDRO SANCHES ARAUJO - 190094621

**MOBILE EDUCATION**

Software Requirements Specifications

BRASÍLIA - DISTRITO FEDERAL

October, 2021



## SUMMARY

<b>1. INTRODUCTION</b>	<b>2</b>
1.1. PURPOSE	2
1.2. SCOPE	2
1.3. DEFINITIONS, ACRONYMS, AND ABBREVIATIONS	2
1.4. REFERENCES	2
1.5. OVERVIEW	3
<b>2. OVERALL DESCRIPTION</b>	<b>3</b>
2.1. PRODUCT PERSPECTIVE	3
2.2. PRODUCT FUNCTIONS	3
2.3. USER CHARACTERISTICS	4
2.4. CONSTRAINTS	4
2.5. ASSUMPTIONS AND DEPENDENCIES	4
<b>3. SPECIFIC REQUIREMENTS</b>	<b>5</b>
3.1. SYSTEM FEATURES	5
3.2. PERFORMANCE REQUIREMENTS	6
3.3. DESIGN CONSTRAINTS	6



# 1. INTRODUCTION

## 1.1. PURPOSE

This Software Requirements Specifications (SRS) document aims to support Aalborg University students involved in the Mobile Education Project to program and develop the Educado mobile application, providing requirements and guidelines based on the user's needs.

## 1.2. SCOPE

The product that will be produced from this SRS is a cell phone app that aims at providing a diversified arrangement of online courses for waste pickers. Within the app, the waste pickers will gain access to different courses through online lessons, as well as the courses' materials. These courses will be focused on providing a higher level of professional capacitation for the waste pickers, as well as its respective certifications from which they can use as a proof of their completed studies and, consequently, achieve better opportunities in their careers.

## 1.3. DEFINITIONS, ACRONYMS, AND ABBREVIATIONS

- LGPD: stands for “Lei Geral de Proteção de Dados”, brazilian regulatory standards for data protection.

## 1.4. REFERENCES

- “eBook: LGPD - Lei Geral de Proteção de Dados” [in portuguese]. Available at: [https://drive.google.com/file/d/1jgCx3WcMxTz2ZlY3UyXOaicgxDqQBb\\_F/view?usp=sharing](https://drive.google.com/file/d/1jgCx3WcMxTz2ZlY3UyXOaicgxDqQBb_F/view?usp=sharing)
- “IEEE Recommended Practice for Software Requirements Specifications”. Available at: [https://drive.google.com/file/d/18p\\_DXES15zYfAvY99MYvhXJL4rc4xQ2D/view?usp=sharing](https://drive.google.com/file/d/18p_DXES15zYfAvY99MYvhXJL4rc4xQ2D/view?usp=sharing)
- “Requirements Specification for Online registration system”. Available at: [https://www.cin.ufpe.br/~in1020/docs/publicacoes/Volere\\_Specifications\\_example.pdf](https://www.cin.ufpe.br/~in1020/docs/publicacoes/Volere_Specifications_example.pdf)
- “Software Requirements Specification For Online Training Application”. Available at: [https://www.academia.edu/15823029/Software\\_Requirements\\_Specification\\_For\\_Online\\_Training\\_Application](https://www.academia.edu/15823029/Software_Requirements_Specification_For_Online_Training_Application)
- “SRS for eLearning Management System”. Available at: <https://belitsoft.com/custom-elearning-development/srs-for-e-learning-management-system>



## 1.5. OVERVIEW

In order to provide the necessary information to help the development of the Educado mobile application, this SRS contains 2 more sections. In section 2 (Overall Description), the goal is to describe general factors that affect the final product, such as the main characteristics of the target audience of the application (waste pickers) and the product perspective and functions, for example. Section 3 (Specific Requirements) details the specific requirements of the platform that will be used by designers, developers and testers to create the product. In presenting the information in that order, the background information needed to explain the requirements is given first, providing a better understanding of the document.

## 2. OVERALL DESCRIPTION

### 2.1. PRODUCT PERSPECTIVE

The application will be used in basic smartphones, both vertically and horizontally. That requires the app to be responsive and adapt its design to each screen orientation. The target user isn't used to using vast technological solutions, so the app interface needs to be very "clean" (i.e., minimalistic) and easy to use (more information about the user characteristics is provided in part 2.3).

It also needs to communicate with Educado's web platform, which allows course creations, so that the available contents are updated frequently and automatically. Considering the socioeconomic status of the app's users, the app needs to use as little device memory as possible. Lastly, it needs to send eventual notifications to the cell phone.

### 2.2. PRODUCT FUNCTIONS

The main functions of the mobile app are:

- User accounts that enable the continuity of studies in different devices, as well as automatic generation of certificates of completion;
- Online studies via structured courses that contain texts, videos, audios and images;
- Measurement of learning via online questionnaires and tests.



## 2.3. USER CHARACTERISTICS

As previously stated, the main target of users for the app is the vast community of waste pickers, who find themselves in a limited environment when it comes to educational opportunities. Although they share different profiles in terms of age and personal backgrounds, most of them experience little or even no opportunities to study at all. Due to that, the waste pickers are usually people with limited technical abilities, as well as little familiarity with similar platforms. Furthermore, most of this community have limited access to technologies and devices that could allow them to explore different sources and different formats of knowledge online, which can naturally cause them to be more reluctant about the idea of reaching out for capacitation via mobile devices. Also, when it comes to time availability, it is common for them not to find sufficient gaps of time in which they would normally prioritize such activities as online studying or even using their mobiles for professional purposes. These characteristics, altogether, presented a challenge on structuring the necessary requirements for the application to properly show itself useful for them.

## 2.4. CONSTRAINTS

The main item that we think will limit the developer's options or affect the software program is Brazil's General Data Protection Law (as known as LGPD). Users' information will need to be stored considering all regulatory guidelines, and terms of use have to be written and be available in the app's initial screen.

## 2.5. ASSUMPTIONS AND DEPENDENCIES

One big assumption regarding the waste pickers and their use of technology is about the operating system used by them. The system used by the vast majority today is Android, but that could change in the future, making it a point of attention. We also assume that the users have Internet access whenever they want to use the product.



## 3. SPECIFIC REQUIREMENTS

### 3.1. SYSTEM FEATURES

#### 3.1.1. COURSE CONTENT

3.1.1.1. Description/Purpose: this module will allow a user to view course content and ask questions.

##### 3.1.1.2. ASSOCIATED FUNCTIONAL REQUIREMENTS

3.1.1.2.1. Support for multimedia contents (texts, audios, images and videos)

3.1.1.2.2. Course summary

3.1.1.2.3. Help Forum

#### 3.1.2. TEST/QUIZ PARTICIPATION

3.1.2.1. Description/Purpose: users shall be able to take participation in the course's test/quiz.

##### 3.1.2.2. ASSOCIATED FUNCTIONAL REQUIREMENTS

3.1.2.2.1. Compare user's answers to answers database

3.1.2.2.2. Show scores

3.1.2.2.3. Generate certificates of completion

#### 3.1.3. COURSE ENROLMENT

3.1.3.1. Description/Purpose: this module will allow a user to request for enrolment in a course chosen by him.

##### 3.1.3.2. ASSOCIATED FUNCTIONAL REQUIREMENTS

3.1.3.2.1. User login

3.1.3.2.2. Clear differentiation between courses taken and courses still to be taken

3.1.3.2.3. Course description

#### 3.1.4. APP ONBOARDING

3.1.4.1. Description/Purpose: users shall be able to start/stop/skip/complete the platform onboarding.

##### 3.1.4.2. ASSOCIATED FUNCTIONAL REQUIREMENTS

3.1.4.2.1. FAQ



### 3.1.5. NOTIFICATIONS

3.1.5.1. Description/Purpose: users shall receive eventual notifications about the courses they are enrolled or about new courses.

#### 3.1.5.2. ASSOCIATED FUNCTIONAL REQUIREMENTS

3.1.5.2.1. Enable/Disable notifications

### 3.1.6. USER PROFILE

3.1.6.1. Description/Purpose: users shall be able to edit their profiles and data.

#### 3.1.6.2. ASSOCIATED FUNCTIONAL REQUIREMENTS

3.1.6.2.1. User sign-in

3.1.6.2.2. Delete user

3.1.6.2.3. Change password

## 3.2. PERFORMANCE REQUIREMENTS

The system is required a fair amount of speed especially while browsing through the course catalogue and courses' contents. The outcomes of the product are not directly influenced by its speed, because all the operations are linked to each other and one operation can not be computed before the one causing it.

The system needs to be available to users 24/7, and should be updated with new courses created in the web platform constantly.

When the system is disconnected or frozen due to over access at the same time, it should save all the process of the users have made up to the point of abnormal happenings. When the users log in with the same id, all the work should be provided.

The system should be able to manage all the information incoming from the database and the catalogue.

## 3.3. DESIGN CONSTRAINTS

The size of the screen should be small for the most part of waste pickers' mobile devices.