



Project Title:

Environmental Management Enhancement by
Youth-run SMEs

Deliverable 1.1

Design Study of the EMS Online
Compliance Assistant

The **Deliverable 1.1** with the title “**Design Study of the EMS Online Compliance Assistant**” was prepared by **MAST SA** (<http://www.mastgroup.gr/>)



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System Request

What is an EMS

An Environmental Management System (EMS) is a framework that helps an organization achieve its environmental goals through consistent review, evaluation, and improvement of its environmental performance. The assumption is that this consistent review and evaluation will identify opportunities for improving and implementing the environmental performance of the organization. The EMS itself does not dictate a level of environmental performance that must be achieved; each organization's EMS is tailored to the its own individual objectives and targets.

Basic EMS

An EMS helps an organization address its regulatory demands in a systematic and cost-effective manner. This proactive approach can help reduce the risk of non-compliance and improve health and safety practices for employees and the public. An EMS can also help address non-regulated issues, such as energy conservation, and can promote stronger operational control and employee stewardship. Basic Elements of an EMS include the following:

- Reviewing the organization's environmental goals;
- Analyzing its environmental impacts and legal requirements;
- Setting environmental objectives and targets to reduce environmental impacts and comply with legal requirements;
- Establishing programs to meet these objectives and targets;
- Monitoring and measuring progress in achieving the objectives;
- Ensuring employees' environmental awareness and competence; and,
- Reviewing progress of the EMS and making improvements.

What is EMAS?

The EU Eco-Management and Audit Scheme (EMAS) is a premium management instrument developed by the European Commission for companies and other organisations to evaluate, report, and improve their environmental performance. EMAS is open to every type of organisation eager to improve its environmental performance. It spans all economic and service sectors and is applicable worldwide.

The purpose of EMAS, as an important instrument of the Action Plan for Sustainable Consumption and Production and Sustainable Industrial Policy, is to promote the continuous improvement of the environmental performance of organizations by establishing and implementing environmental management systems by organizations, and periodic evaluation of the performance of these systems, with information on environmental performance, with open dialogue with the public and other stakeholders, as well as with the active participation of employees in the organizations and appropriate training.

Environmental management system: the part of the overall management system which includes the organizational structure, planning, responsibilities, practices, procedures, processes and resources for its

design, implementation, achievement, review and maintenance environmental policy and the management of environmental aspects.

Project Sponsor

Greece and Bulgaria, two neighboring countries with rich histories, since the late 1990s have entered an era of closer cooperation, thanks to the INTERREG Program "Greece - Bulgaria". The basic idea behind INTERREG is that countries face a variety of issues that they can be resolved better if they work with their neighbors than if everyone remains limited to its borders. For this reason, the Program promotes activities that bring people closer. It is a fact that what happens on one side of the border also affects on the other, there is therefore a need for joint action. There are collaborations with public and other bodies on both sides of the border that can benefit and positively influence the maximum possible number of inhabitants, financing a large variety of actions belonging to the areas of competitiveness, environment, culture, transport, health and social issues.

The Act "Environmental Management Enhancement by Youth-run SMEs" with the acronym "EnvironmentYou" aims at planning a series of actions aimed at its protection, preservation and restoration biodiversity, and soils, but also the promotion and support of functions and services provided by ecosystems, through green infrastructure and the protected network Natura2000 sites.

The Need

Online tool for educating and self – assessment of environmental performance target groups of the Project which are small and very small enterprises and are active in agricultural sector and in the processing of agricultural products. The tool will be developed on the one hand informing / educating users about its significant environmental impact their activity and on the other hand the functionality towards the user and its maximization effectiveness and accuracy of self-assessment of environmental performance and compliance with the requirements of the standards. In addition, the contractor will undertake to carry out control of the operation of the application, through its pilot use in small and very small businesses. Finally, it will be responsible for its final control and evaluation

The Deliverable

This comprehensive study concerns a web application, which will run in a browser environment. It includes aspects of the development, the exact specifications, the possibilities and the design for the implementation of the "EMS Online Compliance Assistant" system. To be as informative as possible, it also consists of shapes, diagrams and pictures, including their description, that has to do with the functions of this web application.

The "EMS Online Compliance Assistant" project will be consist of 3 sections. The 1st section will have the role of informing and educating the user about the general framework of environmental legislation and implications. The 2nd section will be a self-assessment platform of the environmental performance of the activity by exporting a personalized report with the possible points of improvement. At the 3rd section, the platform, based on the answers in the 2nd section and the relevant additional information, will export the following:

- i. The basic forms under the new environmental management standard for EMS cross-border areas.
- ii. The further clarifications, information and actions that the entrepreneur must undertake, in order to fully comply with the new standard

iii. Good practices and suggestions related to the specialized activity and its location.

More specifically about the sections, at the 1st section the informative and educational module of the application, in order to introduce the user to the basic concepts of environmental management will include a detailed presentation of the significant environmental impacts of agricultural production and processing activities, good environmental management practices by type of activity and the basic principles and structure of Environmental Management Systems. It will also contain the basic legal framework governing each activity of the target group. The legislative framework will be approached separately for both countries, Greece and Bulgaria, and will also include the general guidelines of European Policy.

The electronic self-assessment platform in the 2nd section, is the second critical link of the overall web application. Its general characteristics will consist of values as being interactive and with a user-friendly environment. Grading will be done using an understandable and easy-to-use grading scale and it will use images where possible to make the content of the questions easier to understand.

The platform will only include closed-ended questions divided into sections depending on the different fields and sections of the templates. It will be based on the approach of self-assessment tools that have already been developed by European organizations, adapted to the specificities and requirements of the common goal.

The questions will emphasize on the operational control according to the new cross-border environmental standard EMS, but also with the well-known and general-purpose ISO 14001 and the EMAS Regulation. It is important that the user will enter as much data and information as possible to capture his current environmental performance.

In the end of the process, the platform will provide to the user the ability to export an evaluation report of the user's activity with the points of improvement and his general score presented in a Radar Chart. The exported report will identify the priorities that the user must set in order to improve his overall score and consequently his compliance. Depending on the improvement points, the exported report will contain general guidelines adapted to the user's profile.

The user will create an anonymous profile, which will retain its basic features and information, so that it can easily come back in the future and carry out a new evaluation cycle in order to see its comparative improvement. Data security will be ensured and will not be shared with any third party, private or public body.

In the 3rd section, the online platform "EMS Online Compliance Assistant" will be the last and most useful link of the overall application. As the electronic self-assessment platform of the 2nd section, in its general characteristics will include interactive and user-friendly environment characteristics and it will also consist of the appropriate closed-ended questions divided into sections according to the different fields and sections of the templates.

Its functionality will be based on "Decision Trees" approaches with the appropriate algorithms. The system will export documents (.doc or .pdf), procedures and instructions, based on the appropriate structure of the EMS system, based on the answers of the user. These exported documents will be consisting of a lot of information, in a simplified, direct and understandable way and as many graphics as possible. The platform will also assist the user by providing additional information portals, in collaboration with the Support Centers that will operate within the project.

The purpose

The purpose of the information and training module at the 1st section, is to give the user of the self-assessment platform of the 2nd section the opportunity to get an overview of the potential impact of his activity and to direct him to a broader context of the facility or farm he manages. In this way he will gain a better

environmental perception of his activity and will be able to complete the required fields from the 2nd module, the self-assessment platform.

On the other hand, the purpose of the self-assessment platform will be twofold. It will have the ability to quantitatively monitoring of compliance with the general legal framework and good environmental practices.

It will also quantitatively control the degree of compliance with the essential requirements of the international environmental management standard ISO 14001: 2015 and the European Regulation 2017/2505 on the voluntary participation of organizations in a Community ecological management and control system (EMAS).

At the end of the process, the system will give as a result to the user the degree of compliance with the new EMS standard, but also instructions for its further utilization.

Feasibility Analysis

Technical Feasibility

- Familiarity with functional area
The team that has taken on deliver the project consists of several experts, both in the IT and in the environmental field, but also experts in the legislation and policies.
- Familiarity with technology
The technology that will be used in the project is not very special so the development team will have the knowledge and the familiarity to complete the development and deliver a high-quality product.
- Project size
The project size is not very big as its going to take approximately 2 to 3 months, so its risk minimizes.
- Compatibility
There is not an existing system, so there are not going to be compatibility issues that has to do with an existing legacy system. This gives the opportunity to develop a vital stand-alone web application.

Economic Feasibility

- Development cost
The development cost is almost zero, as we are going to use opensource software for the development of the web application.
The host of the web application will be low.
- Annual operating costs and benefits
Low annual operating cost
- Intangible costs and benefits
The benefits will exceed the cost because of the social and environmental impact the tool will have.

Organizational Feasibility

- Project champions
Interreg Partners (Greece-Bulgaria)
- Organizational management
User Support, Technical Support
- Users
The users of the system are going to be mostly owners of small and micro enterprises that are active in agricultural sector and in the processing of agricultural products. This means that the web application needs to be simple and easy to handle, because many of them may not have a technical background. The User Interface should be abstract so that the users will not be confused. This online tool will be very useful to them as they will have the chance to get educated and informed about the significant environmental impact of their activity and functionality and maximize the efficiency and accuracy of self-assessment of environmental performance and compliance with the requirements of

standards so they can grow their business. This is why we believe that the users will respond positively and use the platform.

- Other stakeholders

System Requirements Definition

The system will include the 1st and 2nd module, the 1st module is for training and informing the users (1st Section) and the 2nd module is for self-assessment platform and results export (2nd and 3rd section).

Structure

User:

The platform should have a first page to inform the user about the platform and its uses.

There will be a button which will allow to user by clicking it to set the preferred language.

There will also be a selection which will transfer the user to page with a contact form where he can send his question or problem about the platform. The user will need to fill in his email, his full name, insert his message and agree with privacy policy and terms and conditions.

From the first page, the user will need to select to log in or click the “Sign Up” button.

If the user selects to log in, the system will then ask for a username and a password. In case the user has forgotten his password, the system will send an email to the user at the registered email address. He will be able to change the password inside the application, by clicking edit in his personal information.

If the user chooses the “Log in” selection but doesn’t have already an account, he could make a new one by clicking a button “Sign Up”.

The system will transfer the user to another page where he will be asked for his full name, his email, a password and a confirmation for the password and to accept the terms and conditions and privacy policy and terms and conditions.

Once the user creates the account, an email will be sent to him by the system, confirming the creation of a new account.

Then the user will have to select one of the company profiles available to continue to the main page of the account or to create a new company profile. If the user is new and has not already have a company profile he will directly go to the page where he adds his company profile and then he can continue to the main page of the account. To create a new profile the user will have to import to the appropriate gaps the company name, to choose the type of the company from one of the options given and if he pleases to upload a picture for this profile. The categories of between which he can select one will consist of the types:

- Winery
- Tomato greenhouses (industrial type)
- Processing fruits such as pomegranates
- Processing of fresh vegetables (beans, okra, chickpeas, other legumes, nuts, almonds, walnuts, etc.) in packaging
- Potato producers
- Cheese and Dairies
- Meat and Cold Cuts (meat and cold cuts products processing)
- Cotton gins
- Services (consulting, IT, etc.)
- Tourism (Hotels, restaurants, etc.)
- Sales (wholesale / retail)

- Breeders

When the user logs in and selects the company profile he wants to enter, the platform will have 2 sections in its page, one with the education section and one with the self-assessment platform. By clicking to one of them, the user will be transferred to the according section of the platform.

In the main page will also be a unit that the user can access his data and personal information. The user should be able to modify them and see the past ranking of the self-assessment platform and previous documentation from the online assistant.

By clicking edit button, a pop-up window pops with the editing form. The user needs to fill the gaps with the information he wants to alter and click the button in the bottom to save his changes. The username is the same with the full name the user has registered.

At the education section, the user will be able to select the button and transfer in the education platform.

At the self-assessment section, the user clicks the start button and transfers inside the platform. After that, the user will have to choose a range of the number of employees that the enterprise occupies. The self-assessment platform can be used by associations active in these fields, too.

Then, the user will fill a closed questions questionnaire. The style of the questionnaire will be multiple choice with buttons, so the user will be able to choose one answer.

At the end of the questionnaire, the platform will show the user the degree of compliance with the new EMS standard. At the bottom of the same page there will be the EMS Online Compliance Assistant, which will provide him with an analytical report containing the environmental performance evaluation, based on the answers the user gave, but also with documentation with instructions for its further utilization, non-compliance points and corrective actions.

The user should have the option at the end to choose to download the report and the documentation.

The user will be provided with a small guide for understanding how to use the platform in a section in the first page.

The application should be equipped with buttons for navigating to all pages, such as “Back” and “Main Page” in an obvious position.

There will also be a log out button on the top of the main page.

Administrator:

The administrator user will be able to log in to the platform and see the back end.

He will be able to convert the sections.

This includes:

- The questioner and its context in the self-assessment module
- The outputs and the documentation in the EMS Online Assistant module at the end of the self-assessment.

Functional Requirements

In this part of the study are quoted the functional requirements, what processes the web application must perform and what information it needs to contain.

The educational / informative module of the application will consist of:

- Detailed presentation of the significant environmental impacts of agricultural production and processing activities
- The basic legal framework governing each activity of the target group. The legislative framework will be approached separately for both countries, Greece and Bulgaria, and will also include the general guidelines of European Policy.
- Good environmental management practices by type of activity
- The basic principles and structure of Environmental Management Systems.

The self-assessment platform:

- Will be interactive
- It will have a user-friendly interface
- It will only include closed-ended questions divided into sections depending on the different fields and sections of the templates.
- Consideration will be given, where possible, to use images to make the content of the questions easier to understand.
- It will emphasize the functional control according to the new cross-border environmental standard EMS, but also with the well-known and general-purpose ISO 14001 and the EMAS Regulation. Where the user will enter as much data and information as possible to capture their current environmental performance
- Grading will be done using an understandable and easy-to-use grading scale
- It will provide the ability to export an evaluation report of the user's activity with the points of improvement and his general score presented in a Radar chart.
- The exported report will identify the priorities that the user must set in order to improve his overall score and consequently his compliance.
- Depending on the improvement points, the exported report will contain general guidelines adapted to the user's profile.
- It will be based on the approach of self-assessment tools already developed by European organizations, adapted to the specificities and requirements of the common goal
- The possibility will be considered for the user to create an anonymous profile, which will retain its basic features and information, so that it can easily come back in the future and carry out a new evaluation cycle in order to see its comparative improvement.
- Data security will be ensured and will not be shared with any third party, private or public body.

The EMS Online Compliance Assistant will be accessed by the end of the self-assessment section. The platform:

- It will get information from all the data available to the user from the self-assessment section.
- It will be interactive
- It will have a user-friendly interface.
- It will include appropriate closed-ended questions divided into sections according to the different fields and sections of the templates
- Its functionality will be based on "Decision Tree" approaches and appropriate algorithms.
- It will export formatted forms (.doc or .pdf), procedures and instructions, based on the appropriate structure of the EMS system
- It will give a lot of information, in a digestible and as direct and graphic way as possible to the user.
- It will provide him with additional information portals, collaborating with the Support Centers that will operate within the project

Non-functional Requirements

In this section are listed the non-functional requirements, such as the behavioral properties the system must have such as performance and usability, operational matters, security, etc.

The structure of the application will consist of two separate systems

- i. The Backend System (not visible to the user)
 - ii. The user interface (Frontend), which will operate in a browser environment. Possible use of form files for automatic data loading will be an added advantage.
- Access Security
Users should have a username and a secret password to log into their profiles.
The password should be at least 8 characters long.
Passwords shall never be viewable at the point of entry or at any other time.
 - Accessibility
It should be accessible to people with disabilities.
The system should be accessible by people who are color blind, to the extent that they should be able to discern all text and other information displayed by the system as easily as a person without color blindness.
It has to be accessible by people with specific vision needs, to the extent that a user should be able to display the whole user interface in a large font without truncating displayed text or other values.
Be able to use a screen magnifier to magnify a selected part of the screen.
Be able to use a screen reader to read aloud information displayed.
 - Availability
The online platform should be available for use 24/7.
If the system is non-operational, it shall present a user with notification informing them that it is unavailable.
It should be available to the user within 30 seconds.
 - Security
The user's information has to remain private and never been shared.
The system will limit access to authorized users
The database will have a functional audit trail.
 - Usability
It has to be easy to use by adult members (age 18 to 80) of the public.
It has to be able to be used by adult members of the public without training.
The User Interface should be abstract so that the users will not be confused by the amount of information.
 - Interoperability
All modern and popular browsers (Chrome, Edge, Mozilla) will be supported in their latest versions.
It should also have to be able to operate from any mobile device.
The report at the end of the self-assessment should be able to download to the user's computer in pdf or word format.

Personal Data Protection and Management

The entire facility will be located within the EU to ensure compliance with the principles of Personal Data Protection and Management in principle.

In the web application will also provide the users with a Privacy policy and Terms and conditions documents at the bottom of the main page.

Furthermore, to access personal files, special passwords may be required. For identification of authorized users, distinct logon procedures as well as logs recording file access and data changes should be introduced. Access controls ensure that only authorized individuals can read, modify or delete data in the system. Such controls help achieve confidentiality and integrity from a security perspective. Additionally, the built-in controls should make sure that users can access only specific data to perform their duties. Access controls can

thus help ensure that the use of personal data is limited to authorized purposes (purpose limitation) and data is protected from unauthorized access and tampering.

Modules and functions for re-use should be chosen so that they do not perform processing operations, including the collection of data which are not necessary for the purpose of the system.

Tools which communicate personal data to third parties should also be avoided. Where technologies are available that contribute to improved data protection, these should be given preference over less privacy enhanced ones.

The development team should document the system development in an easy to understand and comprehensive manner.

In the testing phase, sampling of real personal data should be avoided, as such data cannot be used for purposes for which it was not collected and using it in testing environments may result in making personal data available to unauthorized individuals. Where possible, artificially created test data should be used, or test data which is derived from real data so that its structure is preserved but no actual personal data is contained in it. If usage of real personal data is necessary for testing, it should be anonymized. The development of simulated datasets for general use by developers should be considered as an alternative.

The end users, system administrators and maintenance staff of the system should be aware of data protection rules.

Operations should work on the basis of comprehensive and current documentation of systems procedures, inter alia about specific requirements related to the processing of personal data. The maximum retention time for data on storage media should be determined to ensure that it is in line with contractual, legal and regulatory requirements.

The user should be provided with information at least on the following elements of the processing operation:

- a. The identity of the institution and of any other institution or entity sharing controllership responsibility and how to contact the institution for enquiries, requests and complaints.
- b. Which personal data it is processing.
- c. Why (purposes) the institution collects and further processes the data.
- d. The recipients or categories of recipients of the personal data, by describing departments or categories of staff having access to the data.
- e. Descriptions of transfers to other institutions or entities must also be indicated together with the reasons for the transfer.
- f. Clear indication of mandatory and optional information within the privacy statement, even though an online form exists designed to show mandatory and optional fields.

The information provided to the data subject should be:

- a. Easily and directly accessible from the home page and any other page used to collect
- b. and process personal data
- c. In clear and in plain language and
- d. Clearly distinguishable from other legal and policy information.

The people with disabilities should be enabled to fully understand and effectively exercise their rights as data subjects if personal data is processed through IT services.

Relevant information should be provided on demand, e.g. by providing a general request email address or web service, and a process to react to such demands within a reasonable time limit.

In case of any change of purpose of processing personal data, data subjects should be informed about it and the legal basis of the changed purpose should be identified.

Users should also be provided with the following information to be transparent with regard to their IT services:

- a. What processing operations are carried out by the organization as a processor and which ones are carried out as a controller.
- b. Any useful information about the data protection practices of the third-party organization in their capacity as controller.

1. Lawfulness, fairness and transparency

- Transparency will be kept on processing of data vis-a-vis data subjects and inform them about the processing, e.g. its purpose and the identity of the controller. Data subjects will be informed clearly on how, to which extend and for which purpose their personal data will be processed. A clear legal basis will exist for the processing of personal data and that processing does not exceed the limits of this legal base. The rights of individuals are respected to access and rectify their data and develop procedures and instructions that clearly explain how data subjects can exercise their right to access and to rectify their data in each phase of data processing. A possibility to withdraw consent has to be given.

2. Purpose limitation

The personal data process will be only for specified explicit and legitimate and limited purposes. There will be a limit in processing of data to its primarily specified purpose and the purpose limitation will be ensure if different kinds of data are collected and processed for different purposes. The users will be communicated if there is any change of the primarily specified purpose of processing their personal data

3. Data minimization

The personal data will be adequate, relevant and not excessive for the purpose. There will be limit categories of personal data chosen for processing to a data collection that is directly relevant for the originally specified purposes

4. Accuracy

Personal data have to be accurate and up to date. Processes will be implemented to ensure and maintain accuracy of processed data, e.g. by automatically checking the quality of information keyed into the system before processing. The data subject will have the possibility to rectify data that is no longer accurate.

5. Storage limitation

The personal data will be kept for no longer than necessary for the originally specified purpose and will be determined upfront retention time for data kept in a form which permits identification of data subjects. It should be ensured that required retention periods are proportionate to the purposes of data collection and limited in time. Assign and manage separately retention time related to data collected for different purposes. The system will be designed in a way that allows to manage the retention time and perform the necessary subsequent actions: deletion or anonymization

6. Integrity and confidentiality

It should also be ensured that personal data is secure and perform a security risk assessment and plan for mitigation measures. Based on the risk assessment, design and implement organizational and technical measures to mitigate risks to a level that is acceptable, avoid processing operations for which mitigation would not be effective, and ensure that a clear decision is made by the responsible management of which risks are accepted and why. As data protection risks are related to the fundamental rights of others, externalization of risks (insurance) is a less viable option than in other domains of risks

Project Classification

- *Size*
The size of the project could be considered a small size project
- *Purpose*
The purpose of this project is to educate, raise awareness and help, with an online tool, citizens with small and micro enterprise, active in agricultural sector and in the processing of agricultural products in the region about the framework and the standards so they could be more aligned with it and improve their businesses.
- *Cost*
The cost of the project is going to be low because of the use of opensource software. Also, the project does not need much personnel to developed.
- *Length*
The length of the implementation will be approximately 2 to 3 months.
- *Risk*
The risk of the project can be considered as low.
There will be tests before the final release.
- *Scope*
By delivering this project, citizens of the two countries will be able to educate and get information about the significant environmental impact of their activity and functionality to the user and to maximize the efficiency and accuracy of self-assessment of environmental performance and compliance with the requirements of the standards. They could also check their percentage of compliance with the standards and the framework. Finally, they will receive guidance to improve their business and be more aligned with the standards and the framework.

User Support

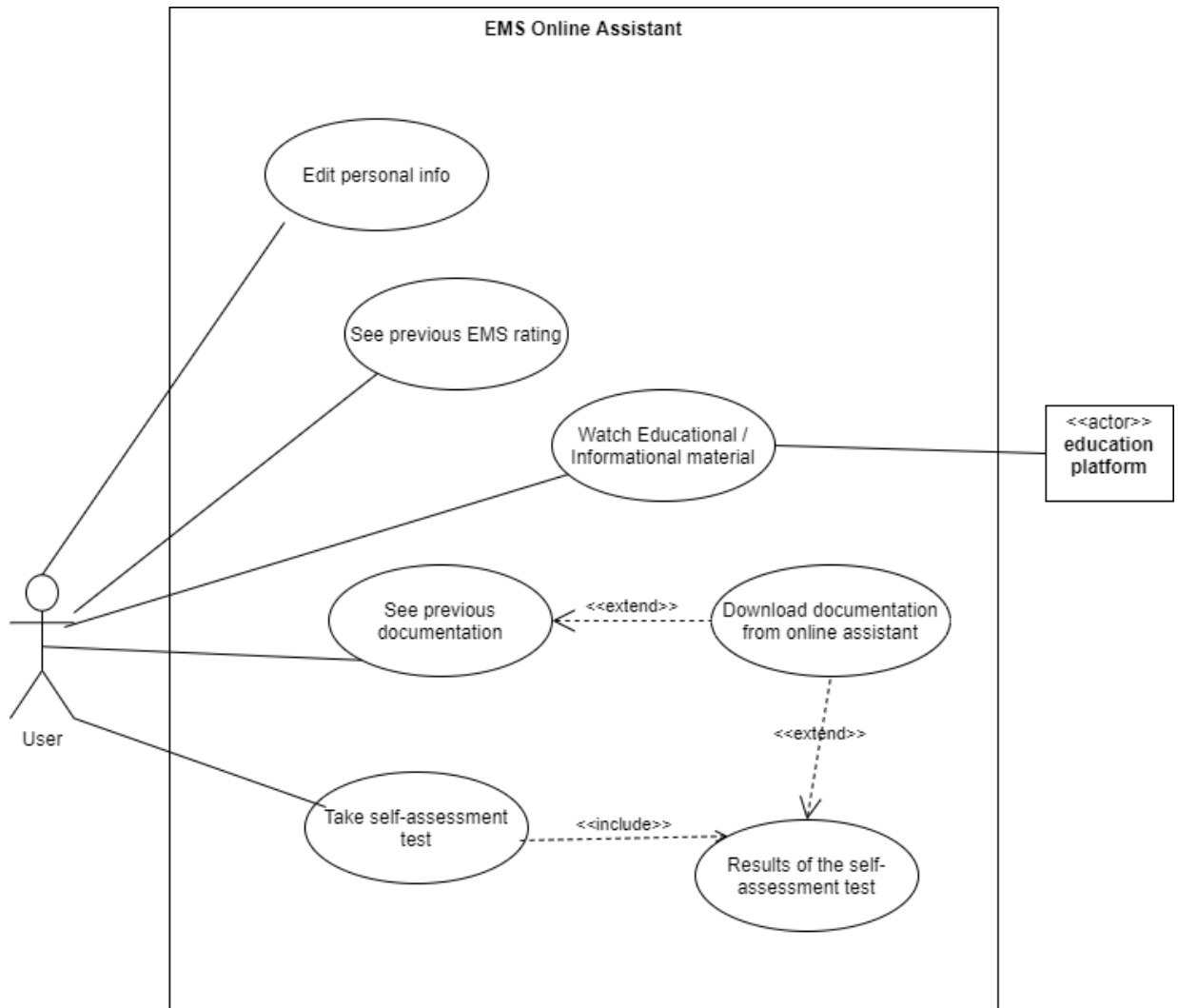
The methodology for user support will be by using a hot-line where the users could call and ask for assistance. There will also be an email in which the citizens can send their questions or ask for information.

The user's technical support will be made by the Partners. It should be both in Greek and Bulgarian, but also English. The personnel that will handle the user support has to be familiar both with the application and the EMS. Some of them will be required to have a technological background to handle the technical support.

1. Use-case Diagram

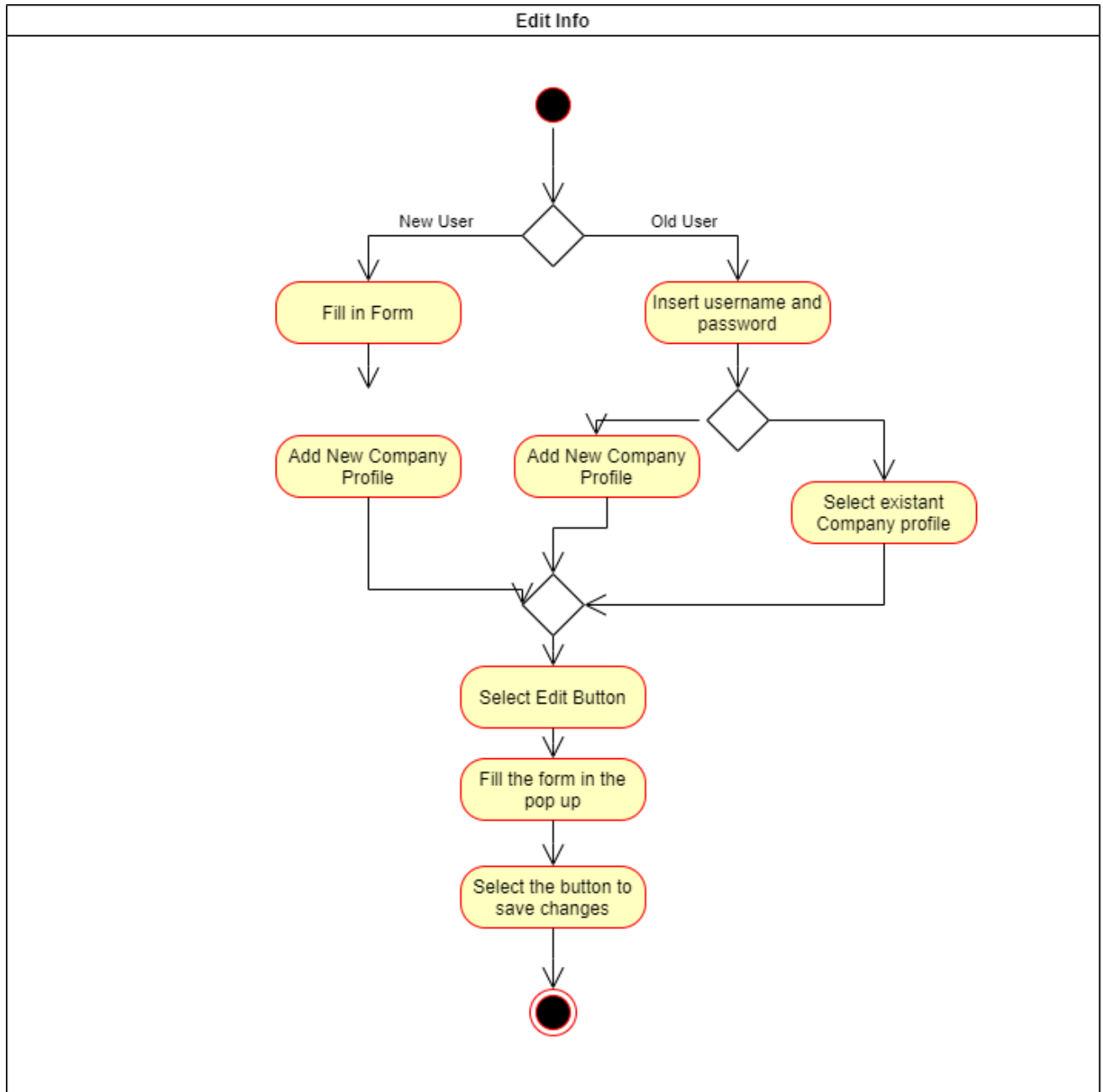
As we see in the diagram, from inside the platform the user should be able do the following:

- Edit personal information
- See his previous rating and documentation
- Reach the educational platform
- Take the self-assessment test and at the end of it see the results and be able to download the documentation.

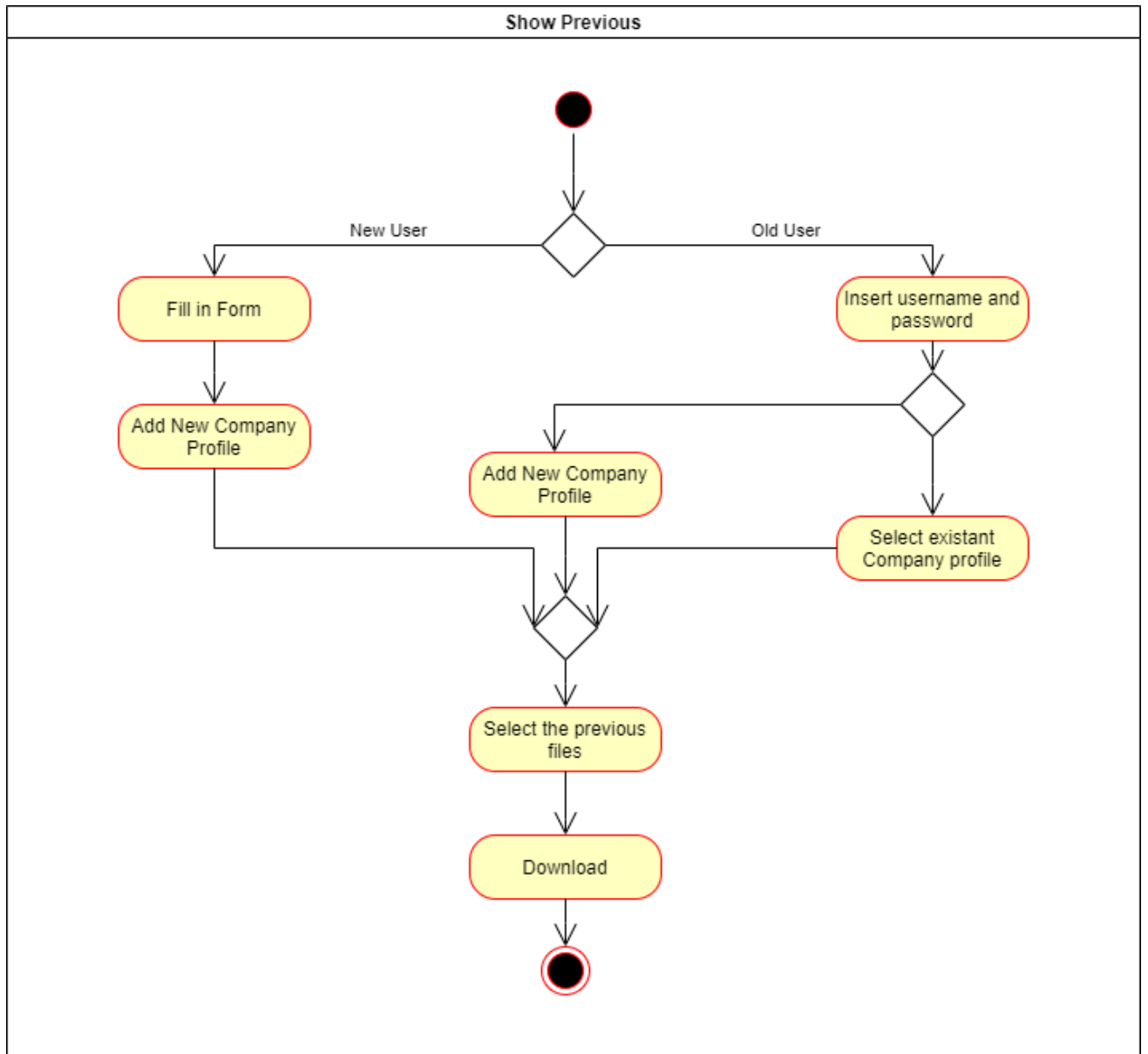


2. Activity Diagrams

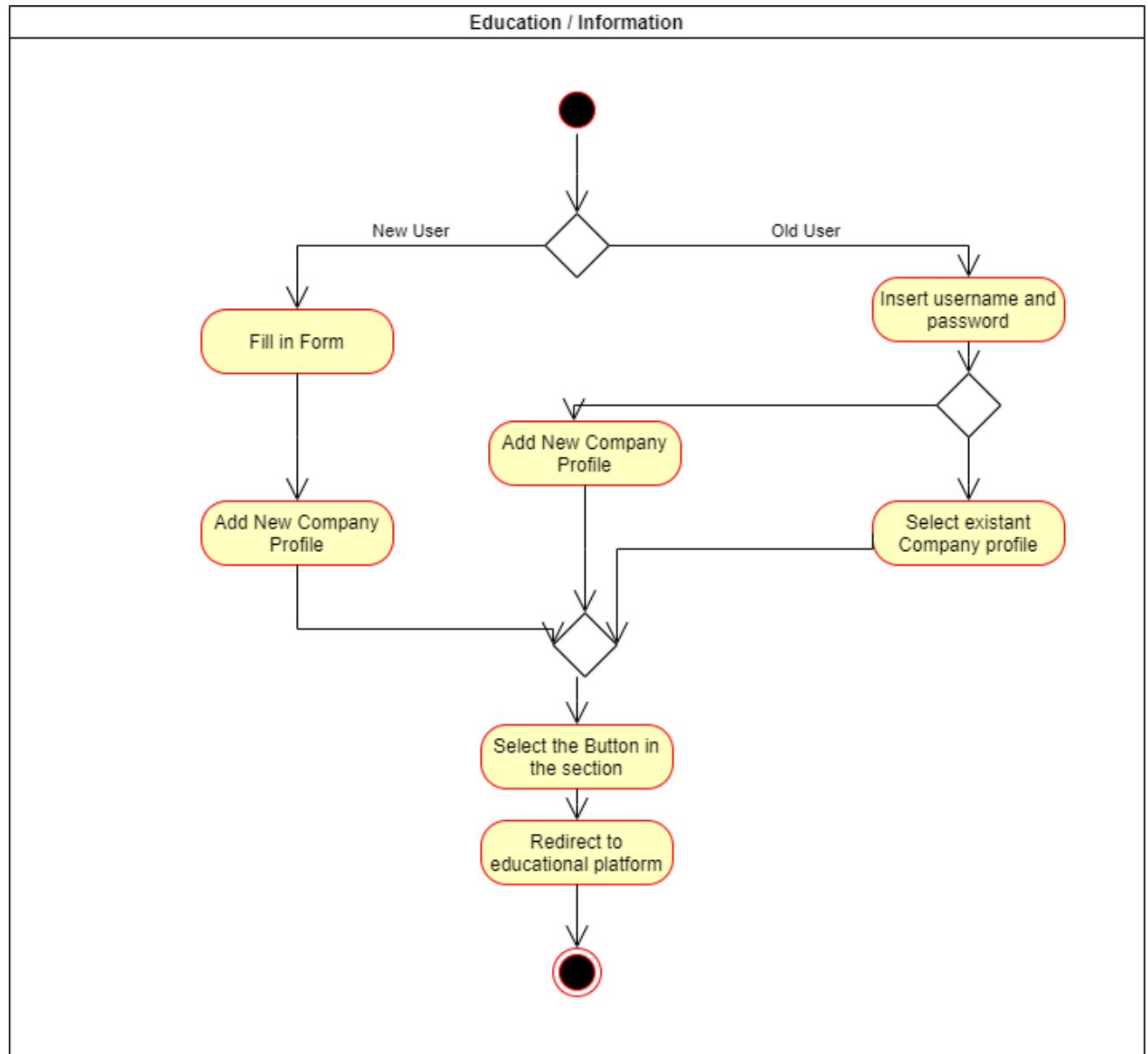
The activities that the user needs to make to edit his information, starts when the user logs in to the platform. If the user is new, he needs to fill the sign-up form and create a new company profile. If it is an old user, he needs to insert his username and password. After that he will need to choose if he wants to use an existent company profile or create a new one. Then, in all cases, the user transfers to the main page, where he needs to click the edit button and make the changes he wants. In the end he will have to select the button in the pop-up window and the changes will be saved and the window will close.



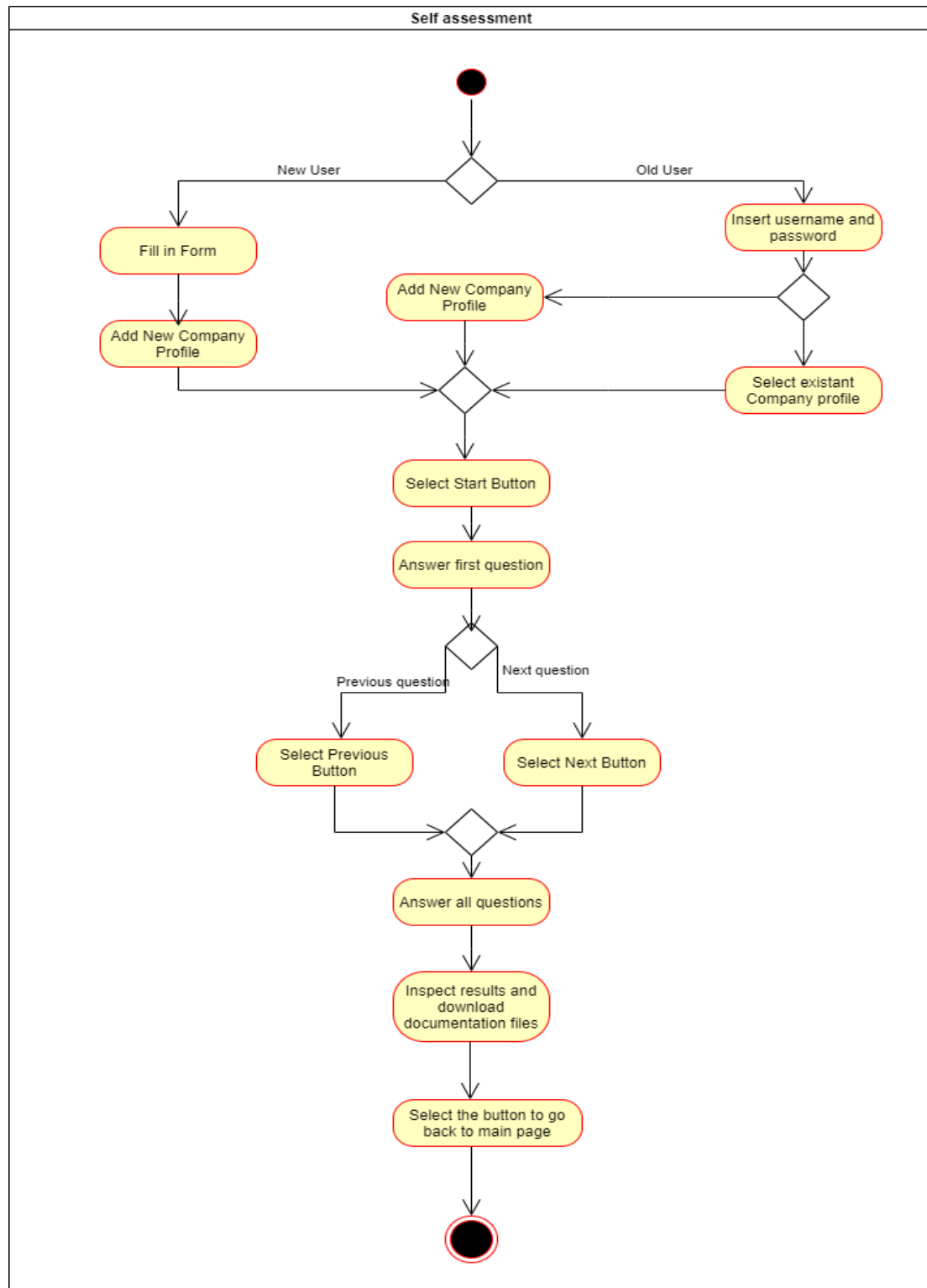
The activities that the user needs to make to download his previous documentation, starts when the user logs in to the platform. If the user is new, he needs to fill the sign-up form and create a new company profile. If it is an old user, he needs to insert his username and password. After that he will need to choose if he wants to use an existent company profile or create a new one. Then the user transfers to the main page, where he can select the files he wants and download them.



The activities that the user needs to make to transfer to the educational platform, is either by the first page of the website, or it starts when the user logs in to the platform. If the user is new, he needs to fill the sign-up form and create a new company profile. If it is an old user, he needs to insert his username and password. After that he will need to choose if he wants to use an existent company profile or create a new one. Then he transfers to the main page and there he will have to click on the button on the appropriate section and he will transfer to the educational platform.

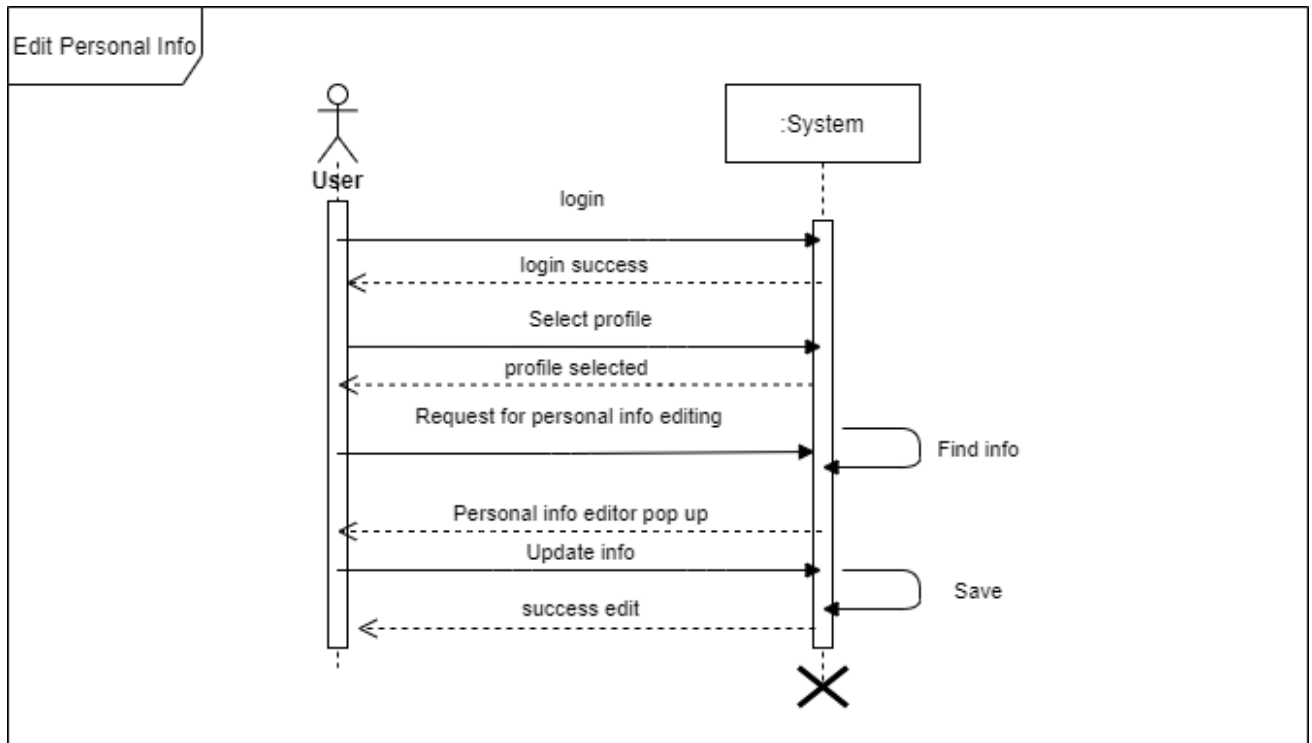


The activities that the user needs to take the self-assessment test, starts when the user logs in to the platform. If the user is new, he needs to fill the sign-up form and create a new company profile. If it is an old user, he needs to insert his username and password. After that he will need to choose if he wants to use an existent company profile or create a new one. Then the user transfers to the main page, where he can find the start button at the appropriate section. The user starts answering the questions and he can navigate through the questions with the previous and next buttons. When the user answers all the questions, he will be able to see the results and the rate of his compliance and download the documentation files. When he is done, he clicks to the button and transfers back to the main page.

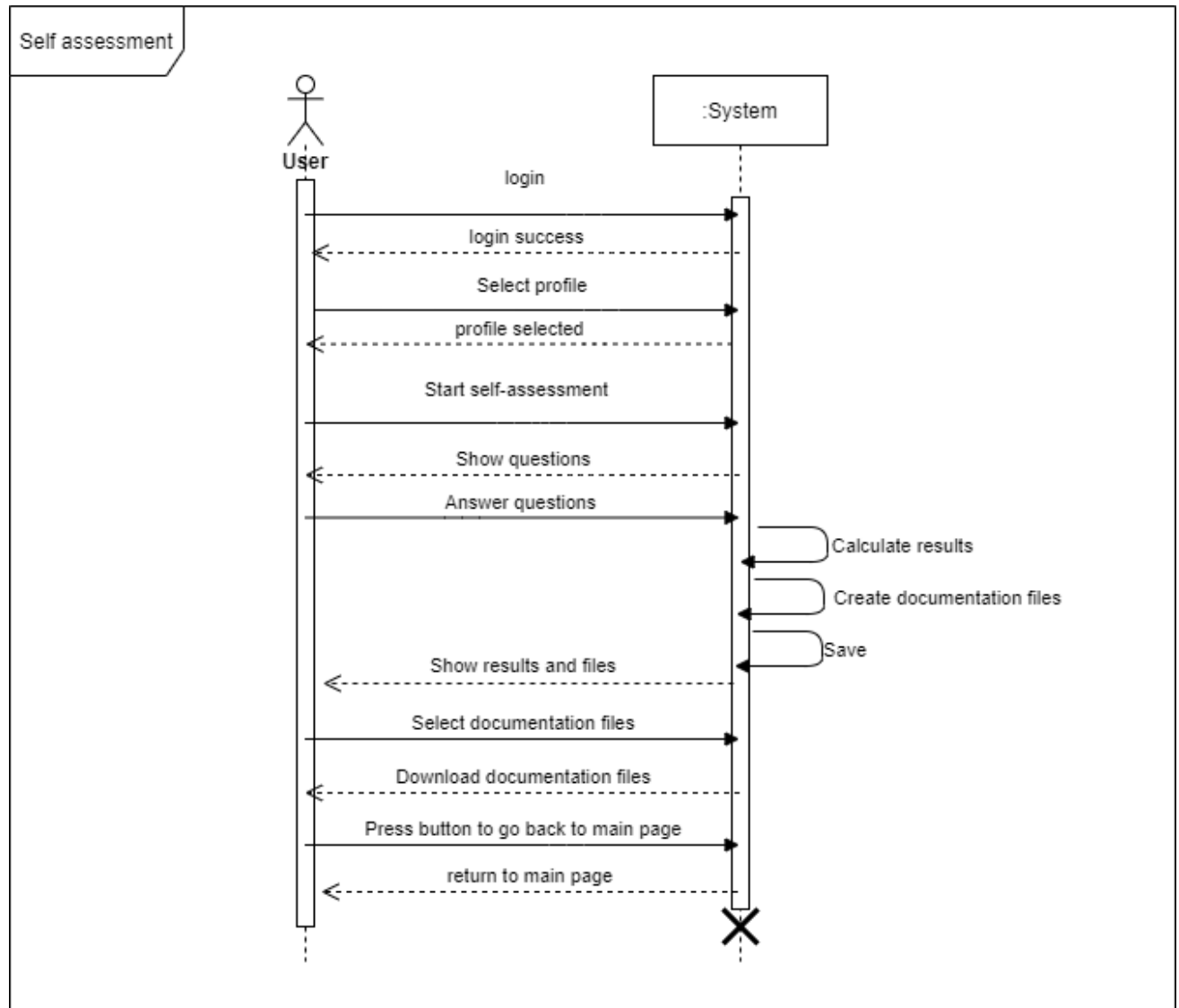


3. Sequence Diagrams

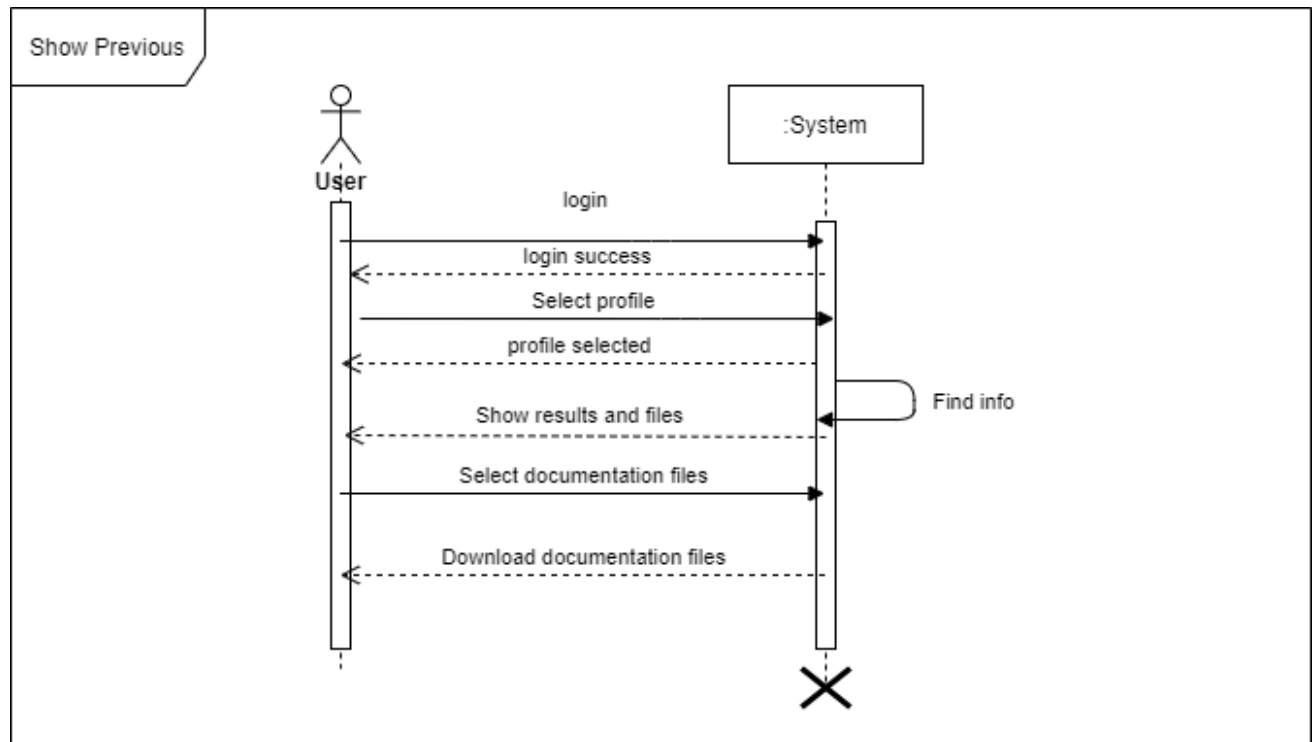
To edit his personal information, the user logs in to the system. The user selects the profile and the system transfers him to the main page of the profile he selected. The user requests the personal information editing form and the system finds the information and opens the personal information editing pop up window. The user updates the information he wants and the system saves the changes and closes the window.



To take the self-assessment test, the user logs in to the system. The user selects the profile and the system transfers him to the main page of the profile he selected. The user selects to start the test, the system starts to show him the questions and the user answers them. In the end of the questions, the system calculates the results, creates the documentation file, saves the results and preview them to the user. The user then can select the documents to save them and the system downloads them to the user's device. When the user presses the button, the system returns him to the main page.

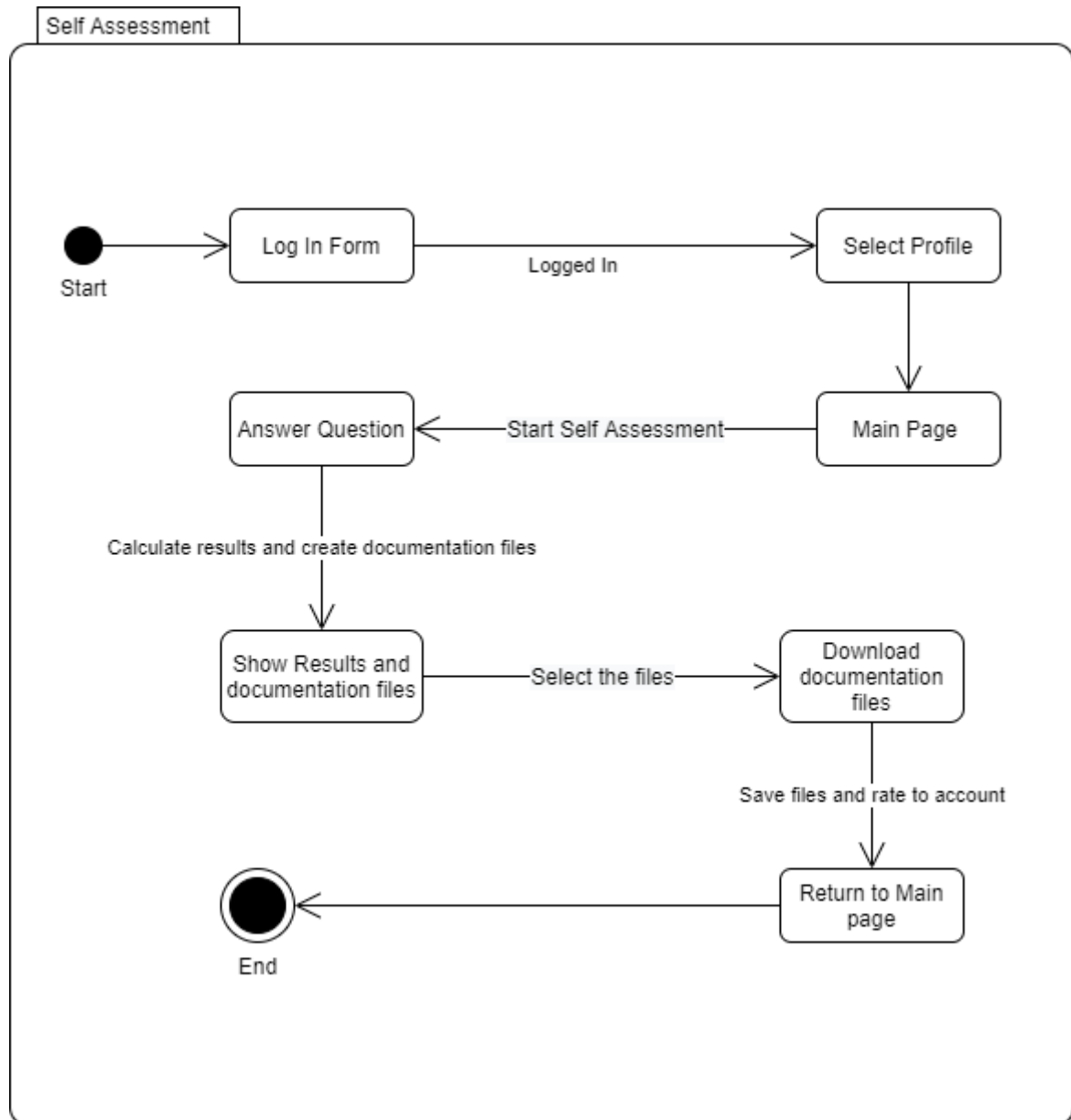


To see the previous results of the self-assessment test, the user logs in to the system. The user selects the profile and the system transfers him to the main page of the profile he selected. The system searches the profiles previous results to the database and show him to the main page. The user selects the documents he wants to download and the system downloads them to the user's device.

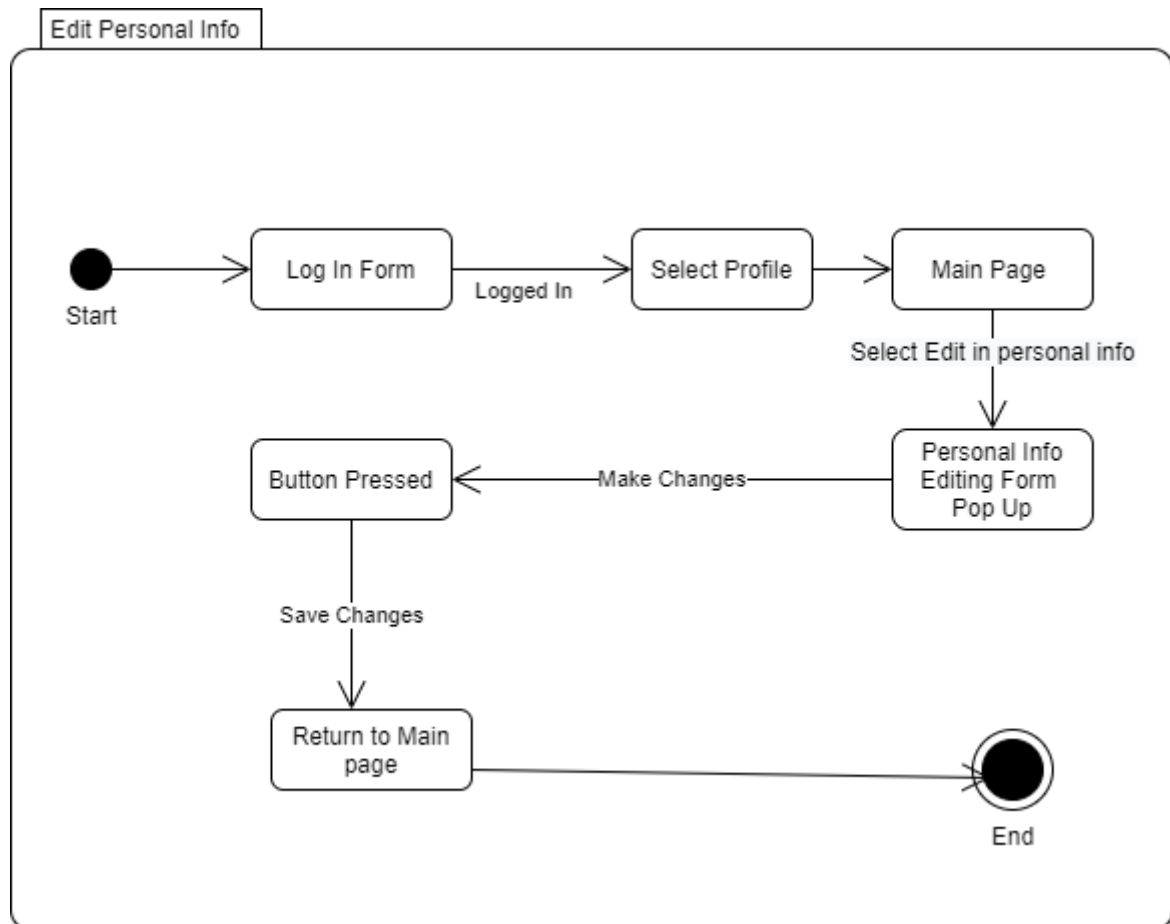


4. State Machine Diagrams

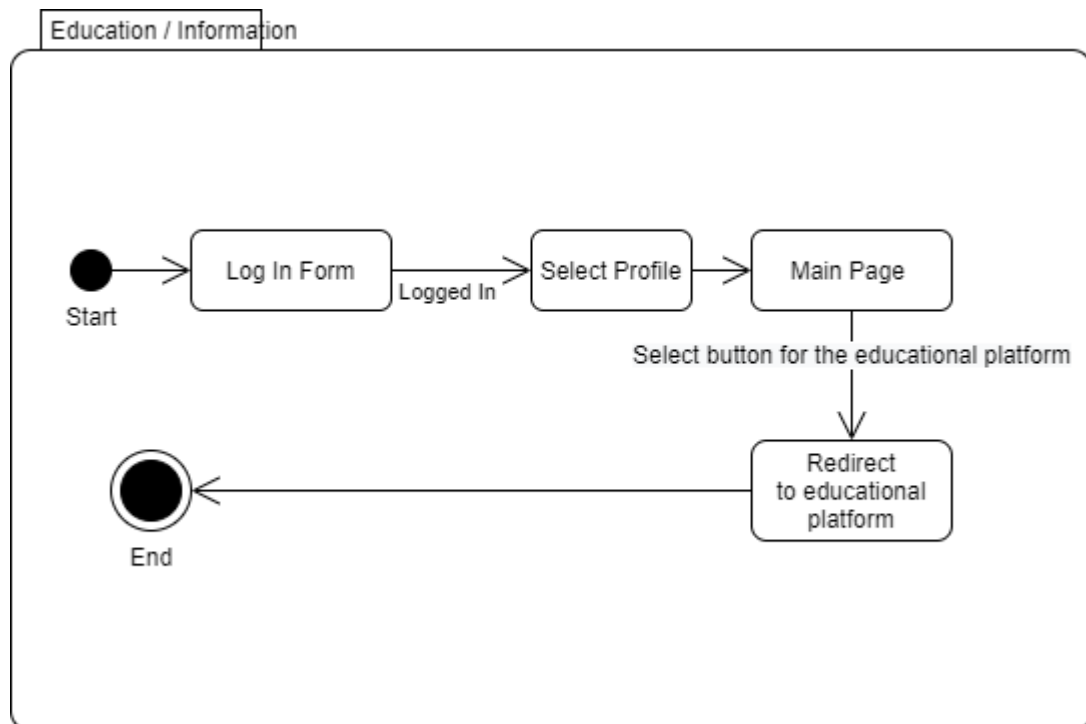
To take the self-assessment test, the system first shows to the user the log in form, then if it is filled correctly, the system shows the available company profiles. When a profile is selected, the system shows the main page of the profile, where the user can select to start the test. By selecting to start, the system shows to the user the questions one by one and at the end it calculates the results, and creates the documentation and show them to the user, so he can download them. Then it returns to the main page.



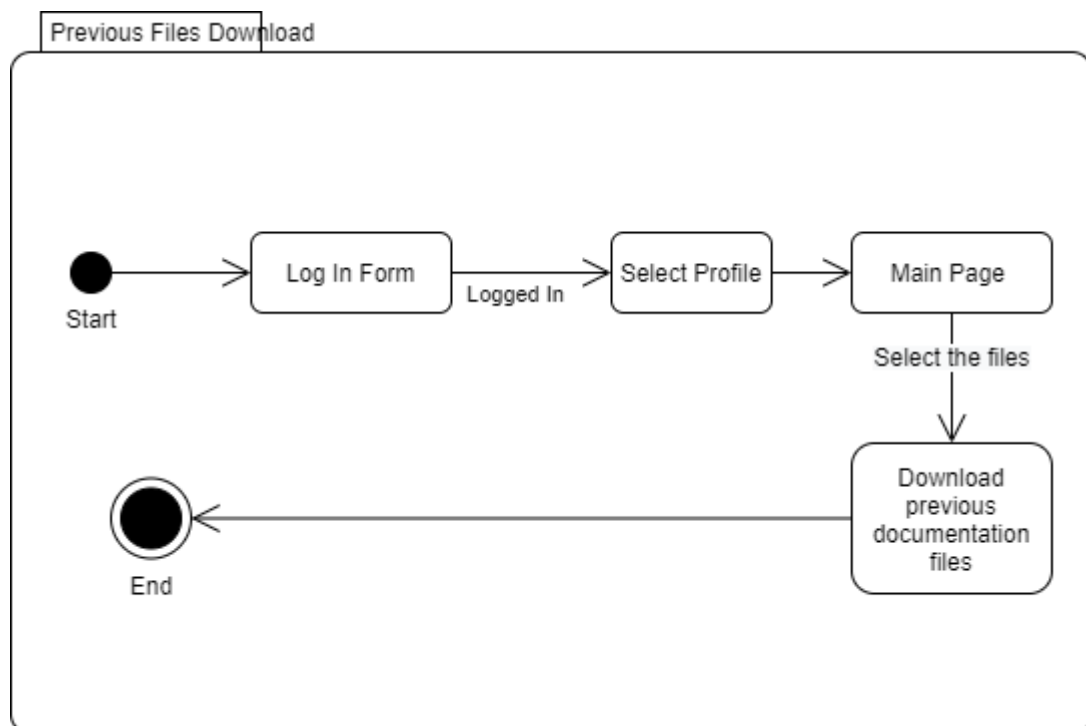
To edit the personal information, the system first shows to the user the log in form, then if it is filled correctly, the system shows the available company profiles. When a profile is selected, the system shows the main page of the profile, where the user can access his personal data. By clicking the edit button, the system opens the pop-up window with the personal information editing form. When the user makes the changes and click the button, the system saves the changes and closes the pop-up window.



To reach the educational platform, the system first shows to the user the log in form, then if it is filled correctly, the system shows the available company profiles. When a profile is selected, the system shows the main page of the profile, where the user can select to redirect of the platform.



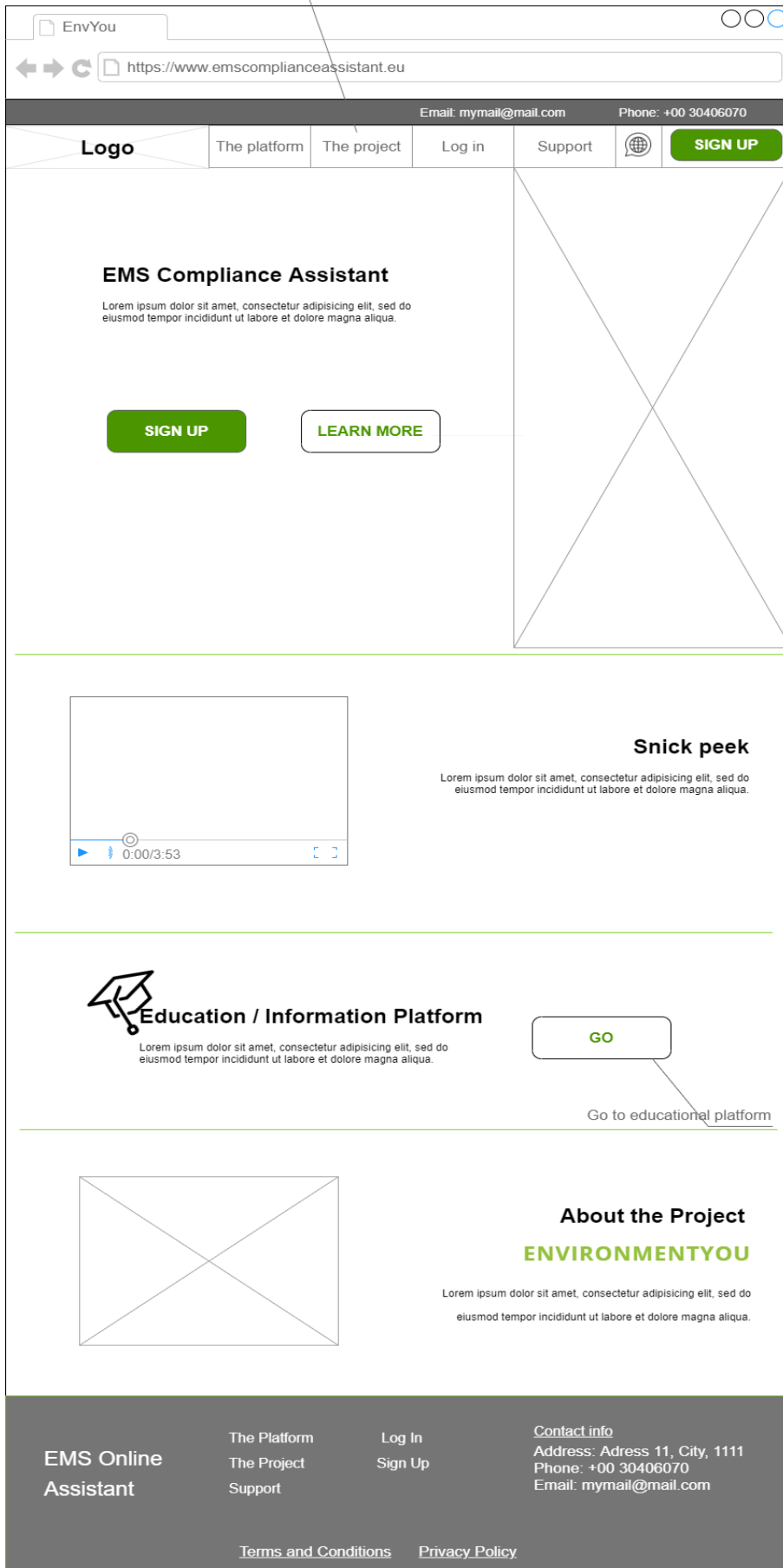
To download the previous files from the self-assessment test, the system first shows to the user the log in form, then if it is filled correctly, the system shows the available company profiles. When a profile is selected, the system shows the main page of the profile, where the user can select the documents he wants to download. The system then starts to download the documents to the user's device.



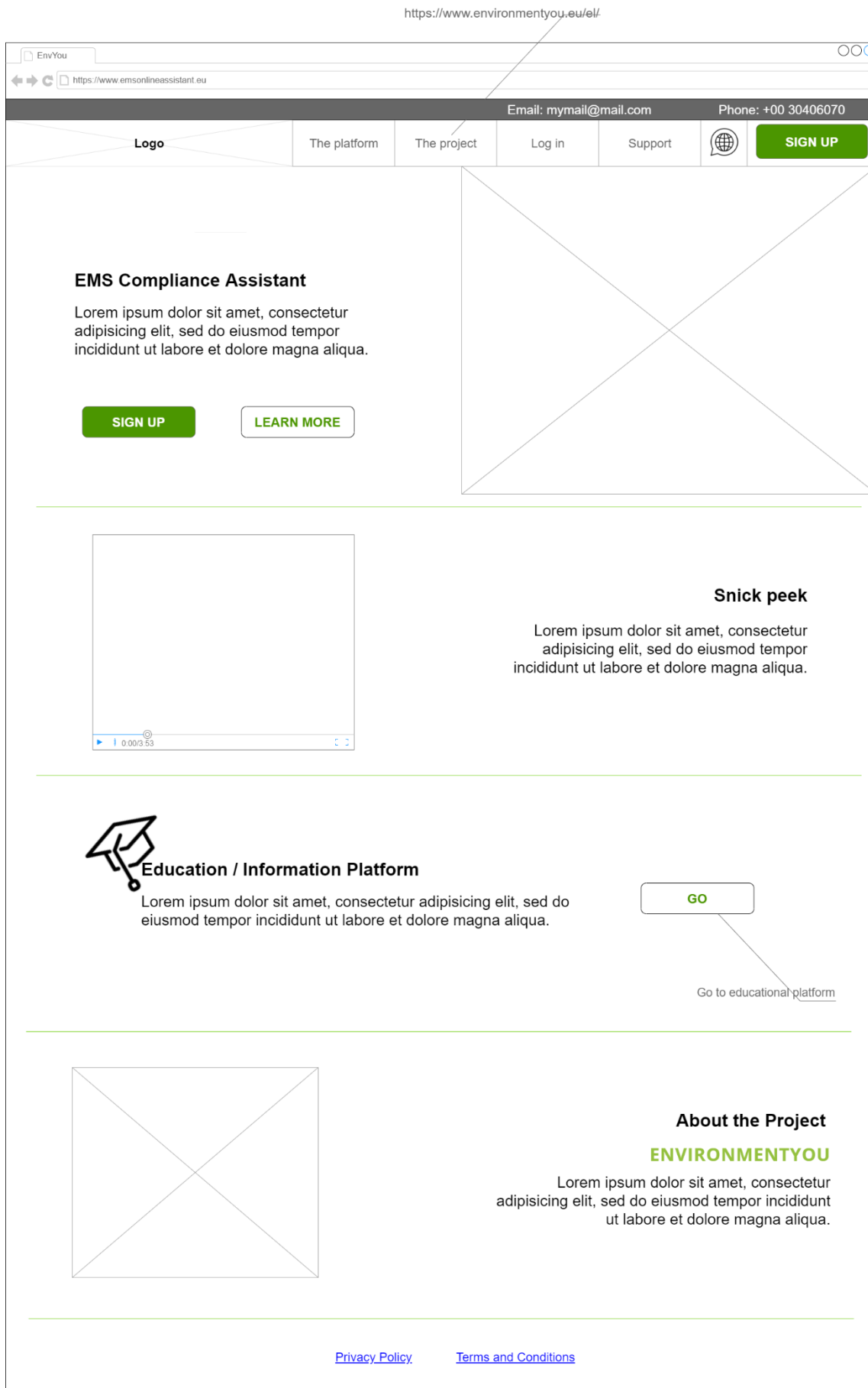
Mockups/UI Design

When the user opens the first page, first he sees some information about the EMS compliance assistant platform. Then he has the choice to either sign up and create an account or to learn more about it. In the first one he will be transferred to the sign-up page (picture 4) and in the second choice he will be transferred to a page that has more information about the platform without signing up. After that, he can see a short video about it and get more information and there is a section informing him about the informational/educational material and by clicking on "GO" he will be transferred to the education platform. At the end he will get some information about the whole project. Then there will be the footer with the pages of the website, some contact information and the terms and conditions and privacy policy links. At the top of the page will be a menu where the user can navigate to the website to learn more about the platform, about the project (which will redirect him to the project's webpage), to get support about the platform and get in contact, but also to log in to his account or to sign up and change the language.

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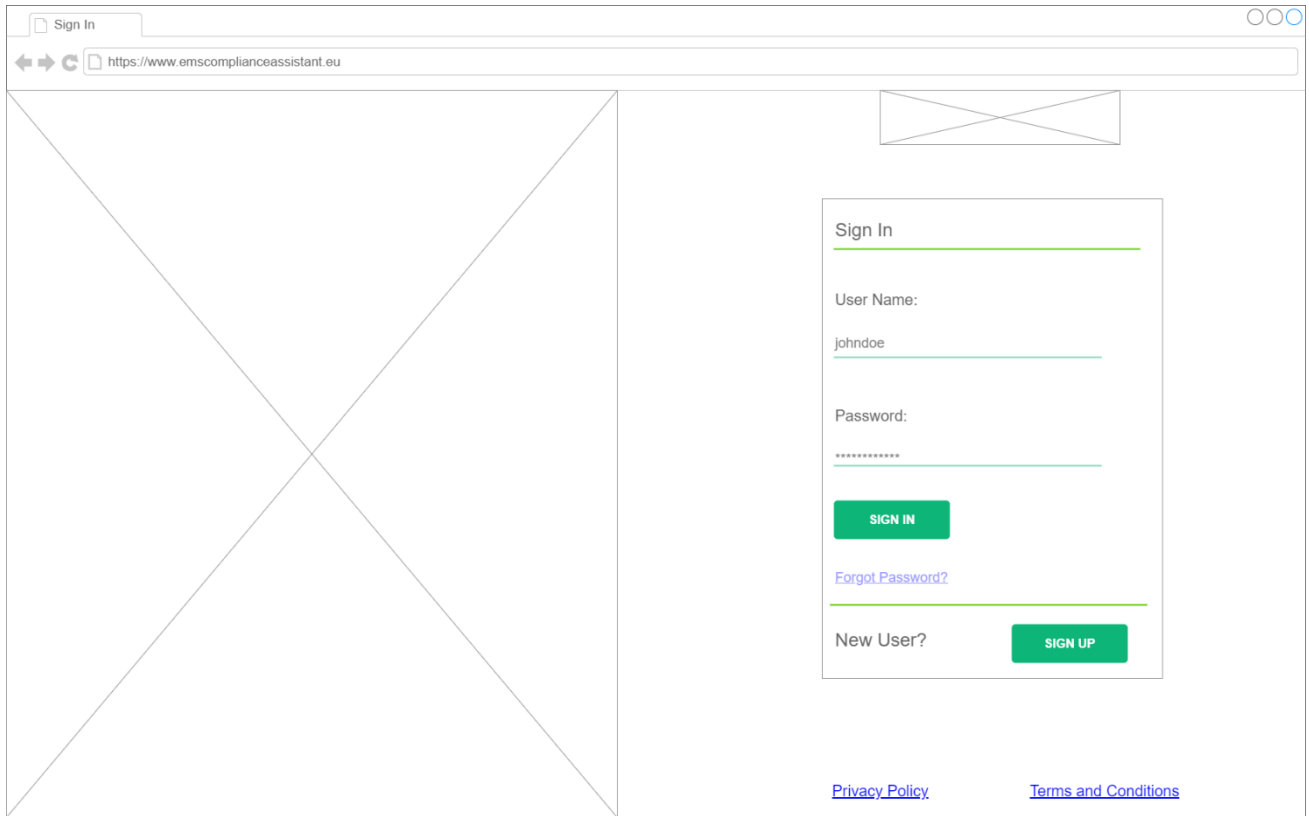


1. First page Mockup Mobile



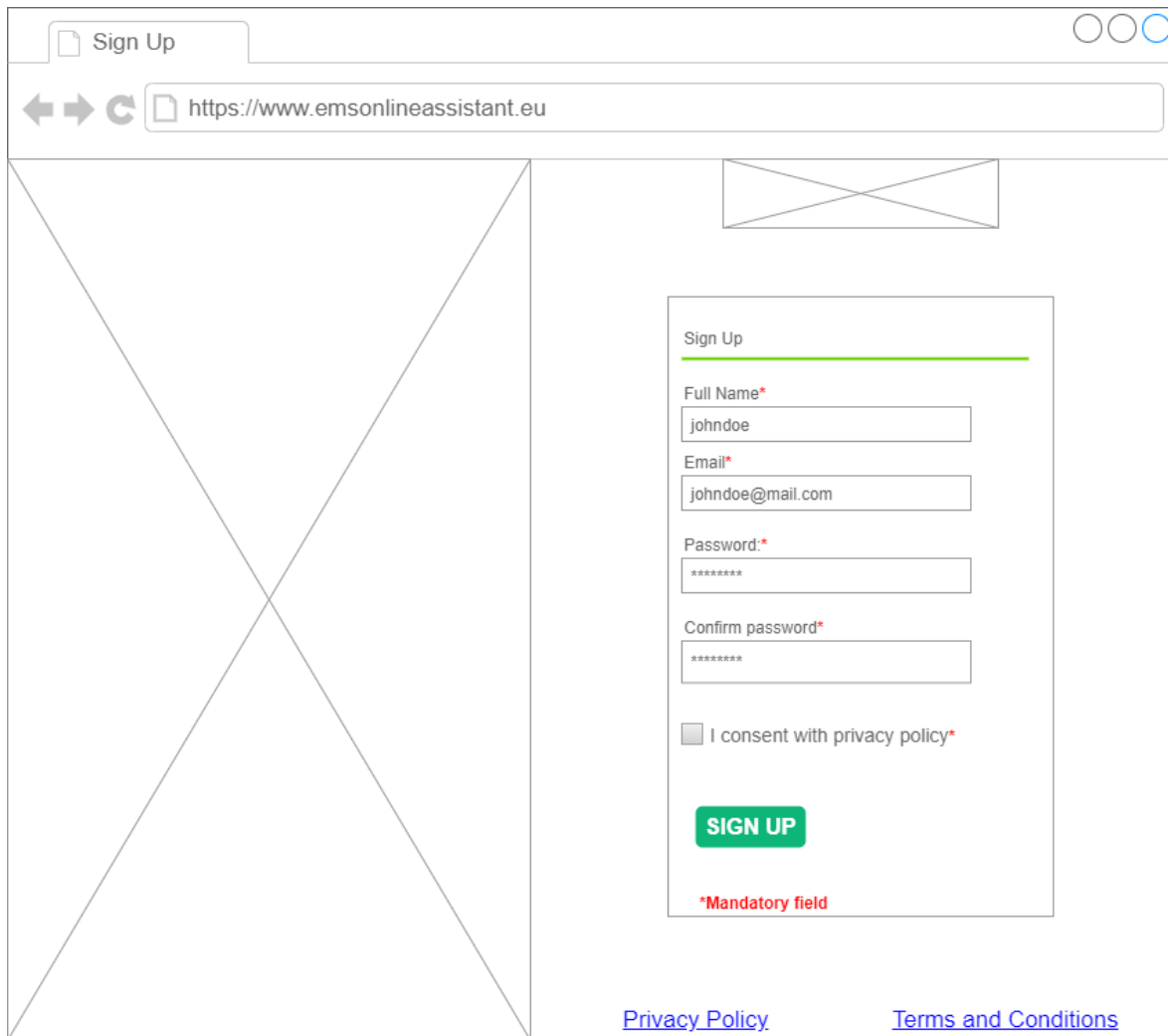
2. First page Mockup

In the sign in page, the user will need to fill in his user name and his password to log in. If he is a new user, he will have the choice to click in the button below the log in form and transfer to the sign-up page (picture 4). If he has forgotten his password, he will be able to fill his email and the system will send him another password to his email if he is already signed up to the platform. If not, the system will send him an email informing him to go to sign up and create an account.



3. Sign In Mockup

In the sign up page the user will need to fill the form with his full name(username), his email, the password he chooses and agree with the privacy policy. Then he will be signed up to the platform and continue.

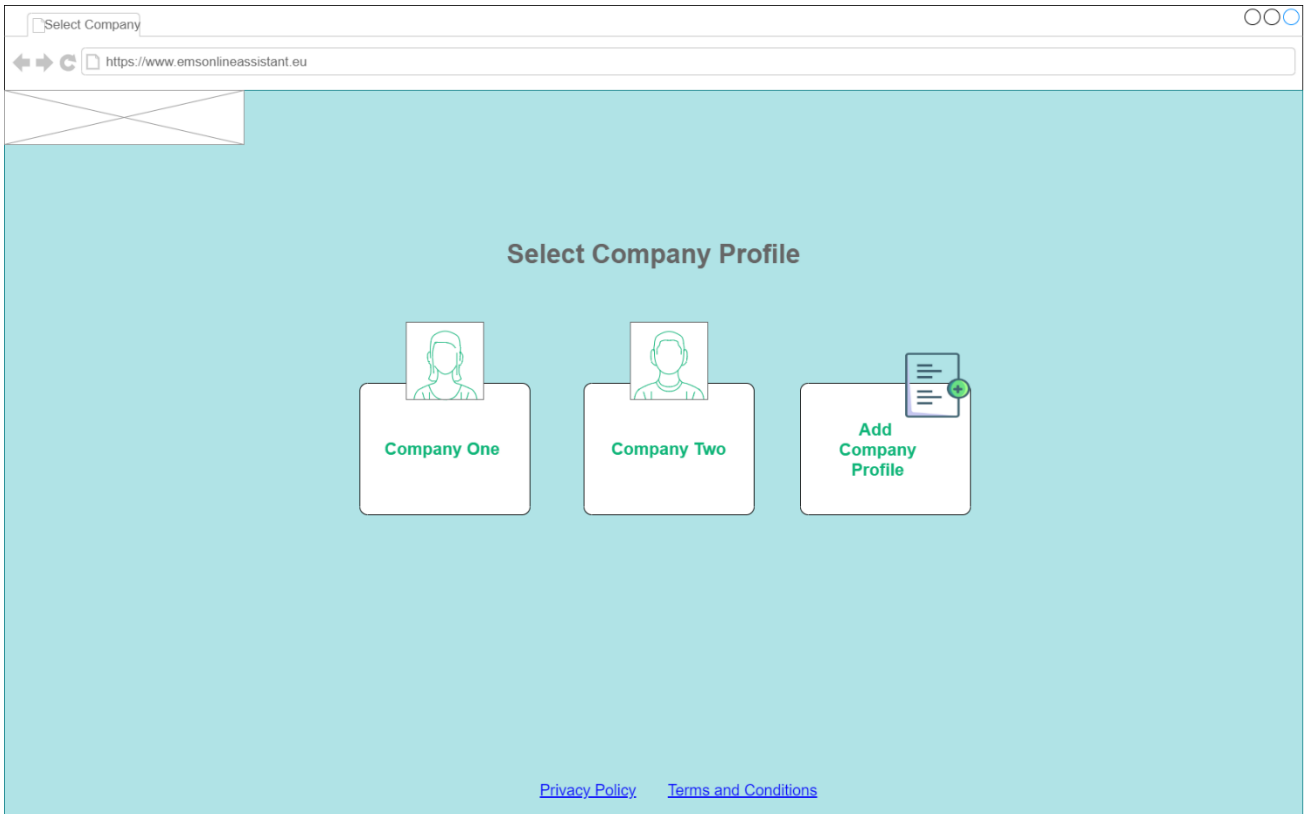


4. Sign Up Mockup

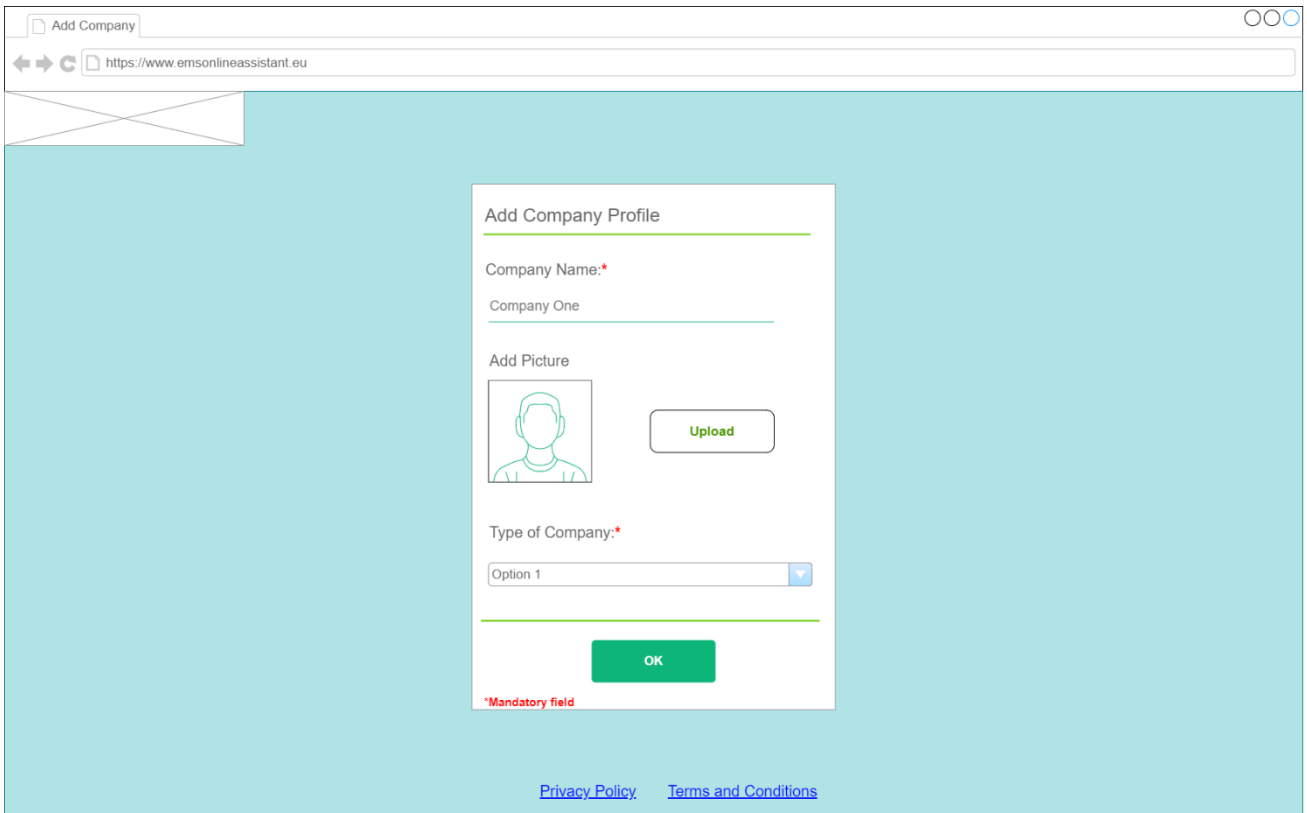
After signing in the user will have to choose one of the company profiles he has. This will help the users who have multiple companies with different type. He can select on by clicking on them. He will also have the choice to create a new one and by selecting that he will transered to the relevant page(picture 6).

If the user is new and has just create his account by signing up, the system will ask him to create a new company profile. This page is for creating new company profiles. The user will need to fill the form with a

company name and select a company type. If he wants he can also upload a photo for this profile. After clicking ok, the system create sthe profile and transfers him to the main page.

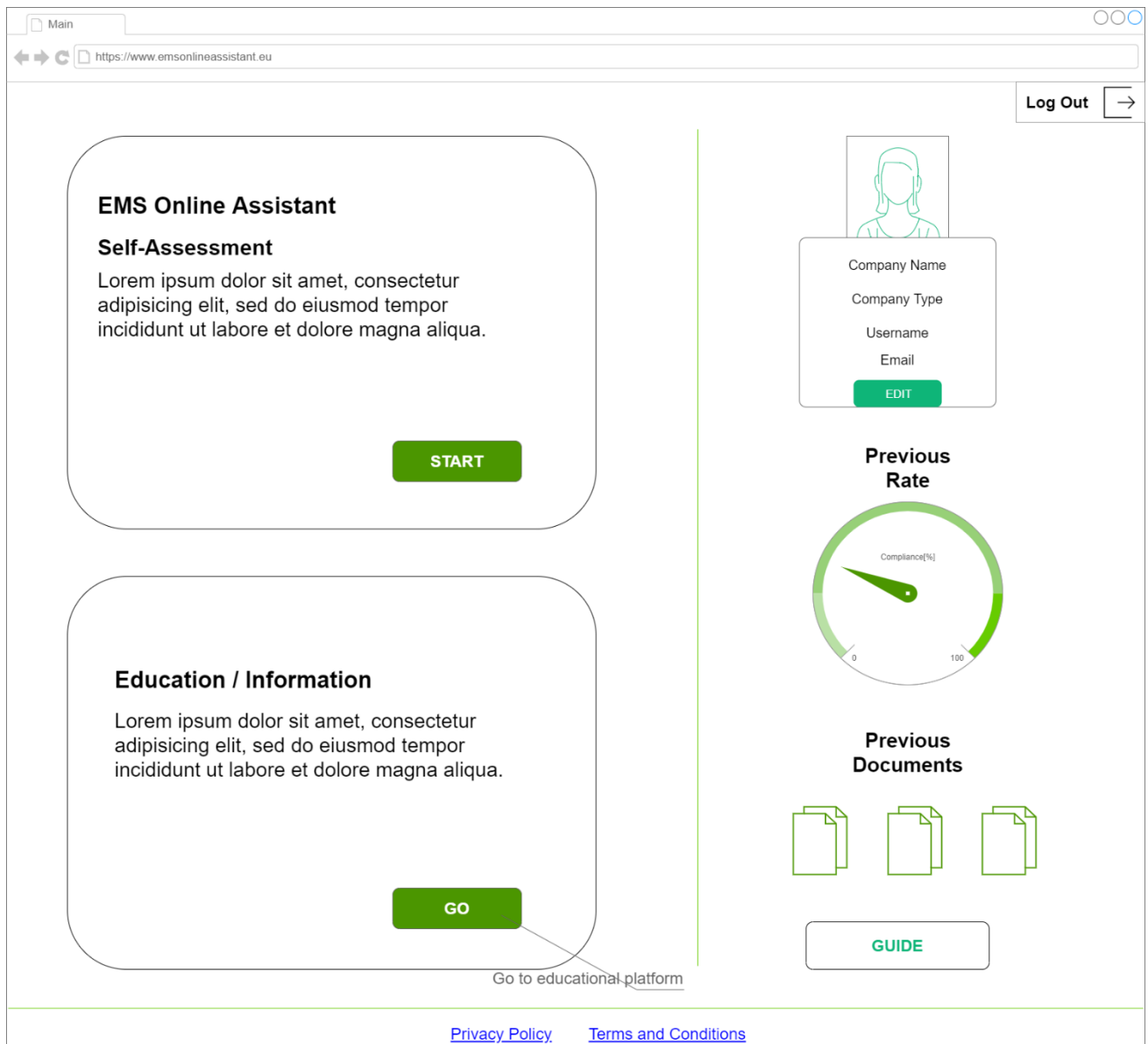


5. Select Profile Mockup



6. Add Profile Mockup

In the main page, the user will be able to start his self assesment test and to choose to transfer to the educational platform. He will also can see his personal information, his company name profile and type, his username and email and to chose to edit them(picture 8). He will also be able to see his previus rate and documentation and to get information for the guide for the platform.



7. Main page Mockup

To edit his profile, a pop up window will show and the user will have the choice to change his name(username), his company profile name, email, password and his picture of this profile. The he will have to click ok to save the changes and he will not be able to leave a blank cell.

Log Out →

EDIT

EMS Online Assi Self-Assessment
Lorem ipsum dolor s
adipisicing elit, sed c
incididunt ut labore e

Full Name*
Messina Cake

Company Profile Name*
Messina Cake Company

Email*
Messina_Cake@mail.com

Password*

Confirm Password*

Change Picture

OK

Username
Email
EDIT

Previous Rate
Compliance[%]
100

Previous Documents

GUIDE

[Privacy Policy](#) [Terms and Conditions](#)

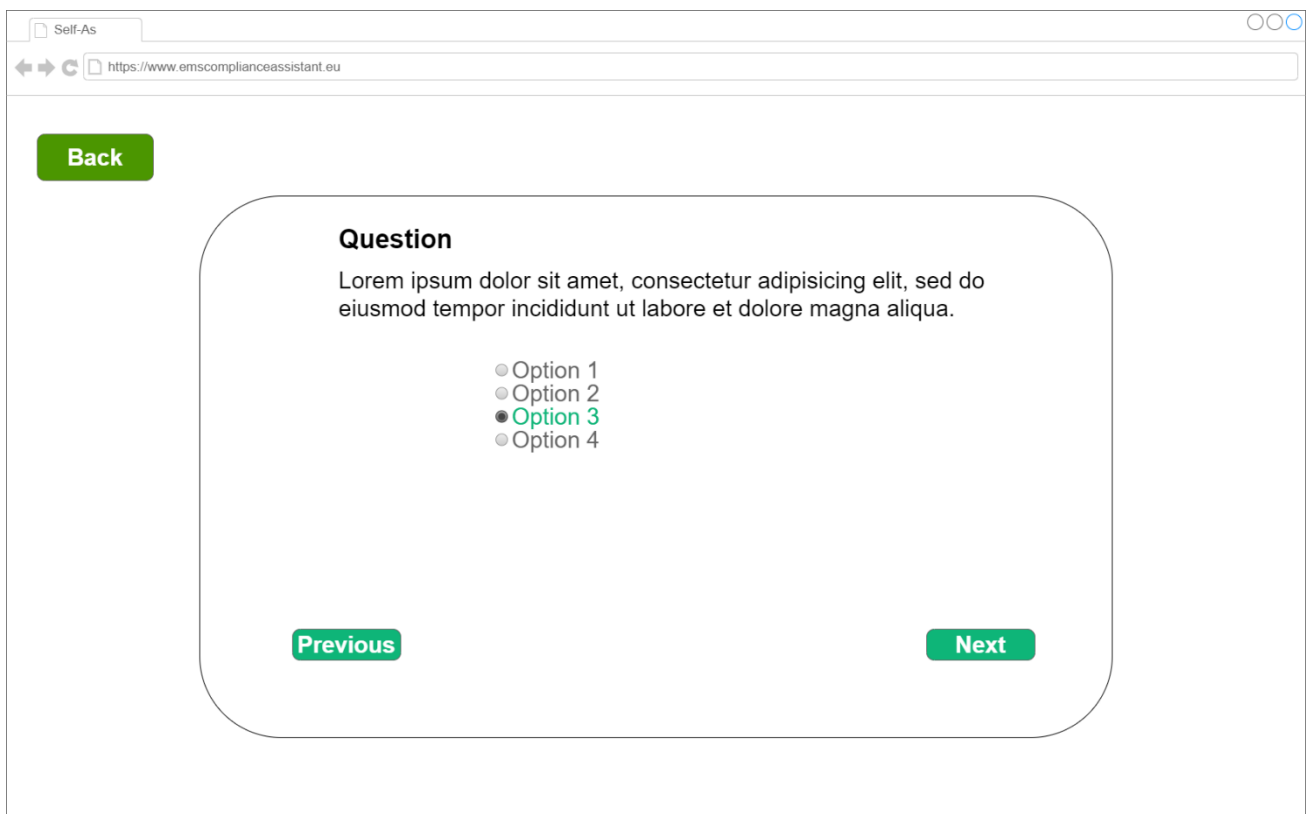
8. Edit info Mockup

At the beginning of the self assesment test, if there is already an unfinished test, the system will ask the user if he wants to continue the previous one where he left. If the user cklicks yes the test continues, if no the test will begin from the start. Inside the test the user will have to choose one of the options given to him. By clicking next he will be transferred to the next question (only if has select an answer), if he click previous he will be

transferred to the previous question. There will be a back button, which by clicking it the user will go back to the main page of the platform. The test will be saved but it will remain unfinished.

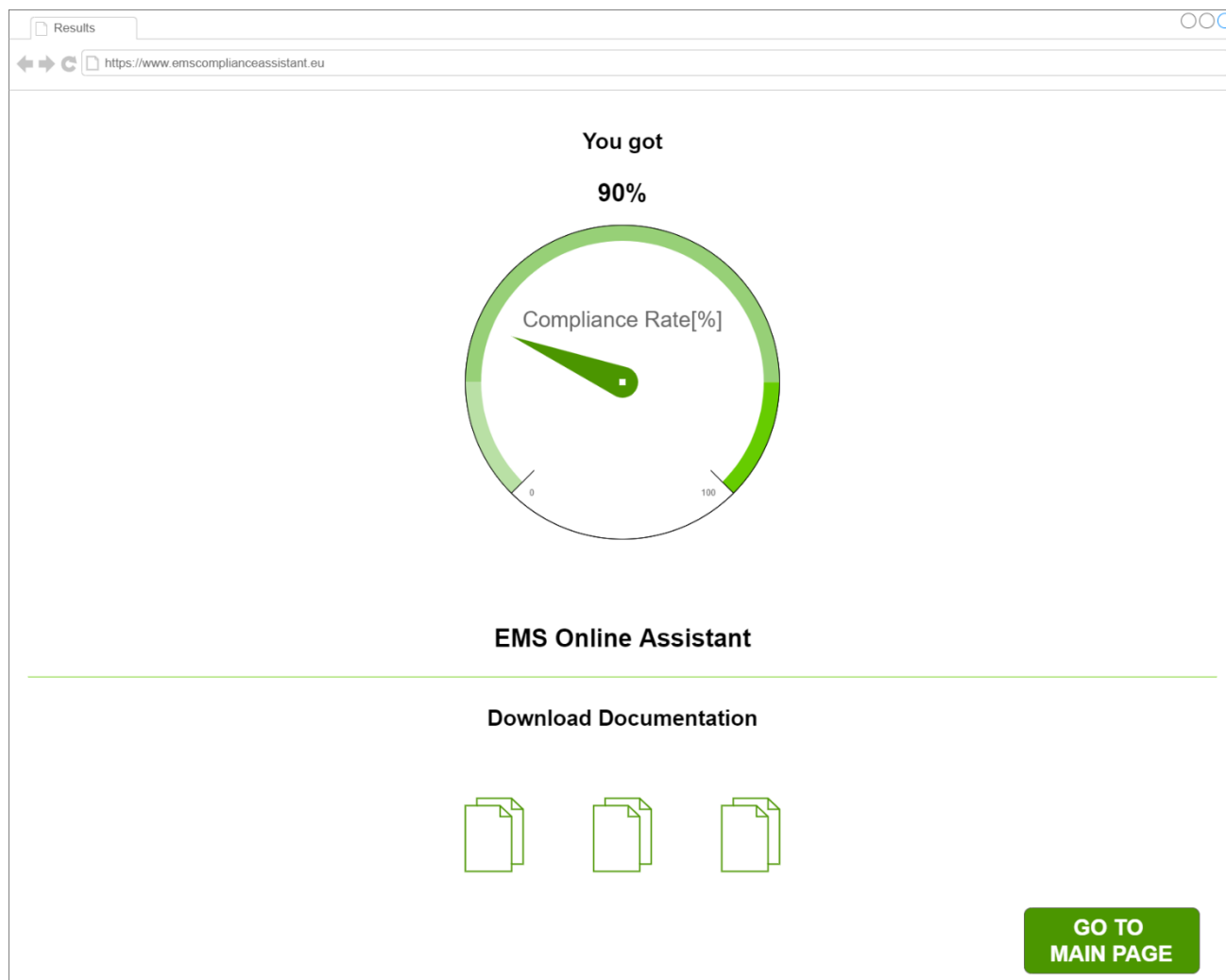


9. CONTINUE Mockup



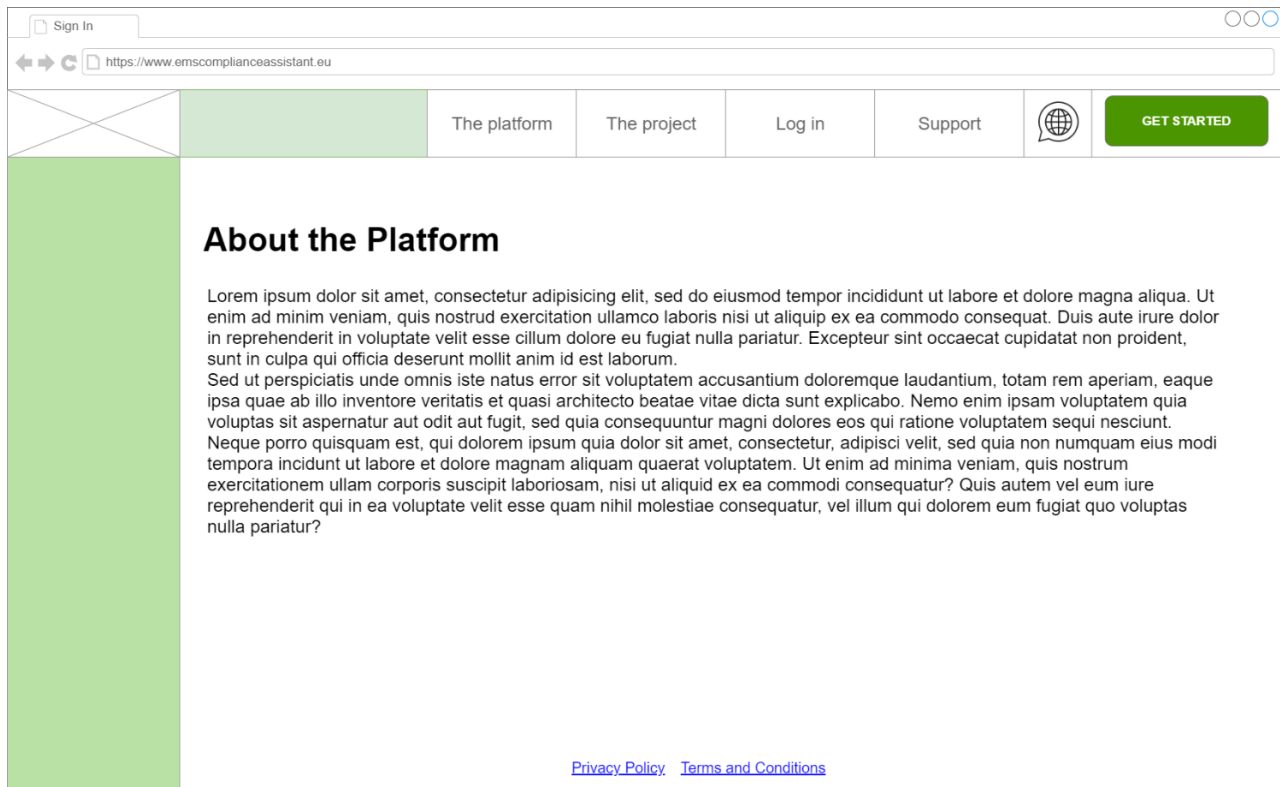
10. Question Mockup

At the end of the test, the system will show to the user the percentage of the compliance rate. After that, the system will give the user the choice to download the documentation with guidelines to improve this rate, based on the answers he gave. To do that he will need to click on the files at the bottom. To go back in the main page of the platform he will have to select the button. The files and the rate will be saved and will show at the main page of the profile.



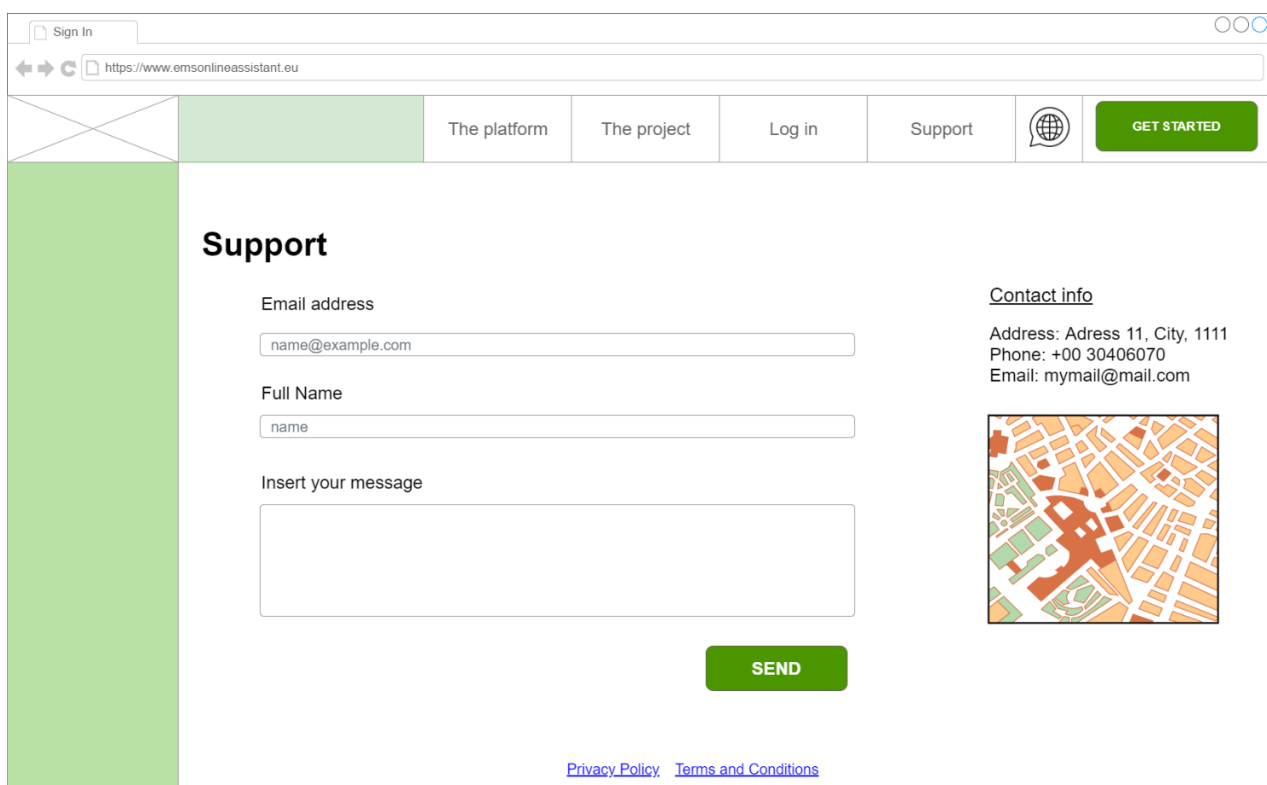
11. Results Mockup

There will also be a page where the user could get more information about the platform. The user can access it by the first page and he will be able to navigate to the website by the main menu on the top.



12. Information Sample Mockup

In the support page, the user will be able to send his message to the support team by filling the form with his email address, his full name and his message. Here he can also find more information to get in contact.



13. Support Mockup

