**Project Plan**

***CareNest***

*People for People NGO*

|  |
| --- |
| **Date : 04.09.2024** |
| **Version : 1.0** |
| **State : Beginning** |
| **Author : Bianca Cristea** |

#### Version history

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Version** | **Date** | **Author(s)** | **Changes** | **State** |
| 1 |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**Distribution**

|  |  |  |
| --- | --- | --- |
| **Version** | **Date** | **Receivers** |
|  |  |  |
|  |  |  |

Contents

[1. Project assignment 4](#_Toc42673512)

[1.1 Context 4](#_Toc42673513)

[1.2 Goal of the project 4](#_Toc42673514)

[1.3 Scope and preconditions 4](#_Toc42673515)

[1.4 Strategy 4](#_Toc42673516)

[1.5 Research questions 4](#_Toc42673517)

[1.6 End products 4](#_Toc42673518)

[2. Project Organisation 6](#_Toc42673519)

[2.1 Stakeholders and team members 6](#_Toc42673520)

[2.2 Communication 6](#_Toc42673521)

[3. Activities and time plan 7](#_Toc42673522)

[3.1 Phases of the project 7](#_Toc42673523)

[3.2 Time plan and milestones 7](#_Toc42673524)

[4. Testing strategy and configuration management 8](#_Toc42673525)

[4.1 Testing strategy 8](#_Toc42673526)

[4.2 Test environment and required resources 8](#_Toc42673527)

[4.3 Configuration management 8](#_Toc42673528)

[5. Finances and Risk 9](#_Toc42673529)

[5.1 Project budget 9](#_Toc42673530)

[5.2 Risk and mitigation 9](#_Toc42673531)

# Project assignment

## Context

### Company

People for People NGO is a non-profit organization dedicated to improving the life of people in need and vulnerable communities. They are actively involved in a wide range of activities and events, having their mission clearly set: providing care and support for people, with the help of people.The organization has brought together thousands of lives and provided support for them in their hardest times.

On the organisation’s neext mission, their focus lies on the elderly and sick people, and they are willing to invest in their well-being. Their efforts towords this vulnerable group are channeled into bridging the gab between support services and individuals.

### Problem description

The initiative of this project started from the observation that elderly people often have difficulties in finding reliable caretakers, especially in an online environment, due to the lack of platforms that offer a user-friedly interface that would help them navigate the web. It is important that a person feels empowered by breaking the barrier of technological evolution, social isolation or limited mobility. Well being is not only about the physical state, but it is also about a good mental state, confidence and a positive outlook on life.

## Goal of the project

The goal of this project is to create an innovative, user-friendly platform that foolows the kew values of People for People NGO and can be used by elderly people to assure their well being in the comfort of their own home. This web application will serve as a tool to connect people with each other, mainly with caretakers, but it will also help them mentain their health.

With the help of this project, people will benefit from having access to easily reachable health monitorisation

From a caregiver’s point of view, this platform will serve as a medium to promote themselves and find faster, easier and more secure a client for who they can provide health services. This way, the NGO will develop a supporting community that connects elderly people together with caretakers that will help them solve any concerns or incidents.

In line with the mission of People for People NGO, which is to uplift and support elderly citizens with dignity and care, this project aims to create a digital ecosystem that not only addresses the healthcare needs of the elderly but also enriches their lives through community engagement, empowerment, and holistic well-being. Moreover, such an online system will help the monitorization of the engagement I this society and facilitate networking between people.

## Scope and preconditions

*<<What activities and which end products (to what extent or quality) belong to the project, and which do not.>>*

|  |  |
| --- | --- |
| **Inside scope:** | **Outside scope:** |
| 1. Web application: an application that includes technologies such as Java for backend, React for frontend and WebSockets for real time chat and notifications | 1. Instruction manuals |
| 1. Database | 1. Maintenance plan |
| 1. Source code | 1. Monetary transactions |
| 1. Design documentation |  |
| 1. Testing: |  |

*<< Indicate any preconditions. E.g., think of technology choices that have already been made by the company. Note that you are also expected to retain a critical, but constructive, mindset for choices already made >>*

## Strategy

*<< Describe the strategy for your project (the approach). E.g., waterfall, or an agile approach like scrum, and justify the choice. >>.*

The strategy that is followed for this project is agile, due to the flexibility and possibility of extending the application, aspects that are crucial in today’s working pace. This approach has its focus on the client’s needs, and offers the possibility to adapt to new requirements during every iteration while mentaining a high standard product that is finally delivered.

## End products

*<< A Product Breakdown Structure (PBS) lists the end products that you realize, including a description of each product. In software engineering, the products are more than just the project plan and the application itself. E.g., requirements documents, architecture documents, research reports and test reports are all end products. These are all important products that are required for effective handover. They are also necessary for further maintenance and follow up-projects. The PBS can change during the course of the project.>>*

This Product Breakdown Structure depicts what the end product of this project consists of, and therefore what is delivered to the client in the end: a software product, along with its documentation and proof of quality assurance measures.

One of the key products is the *Software product*, an application developed during the course of this project that serves the needs of the client by bringing a solution to their initial problem. Diving into the content of this application, it can be broken down into the following products:

* Frontend – a user-friendly interface designed especially for the targeted audience that will allow the users to easily navigate through the application and make full use of the functionalities that address their direct interests
* Backend - server-side logic that handles all the data processing, storing, as well as database interactions
* Database - data storage component, carefully designed for vulnerable information and the management of tasks

Another key product delivered is the *Documentation*, which comprises written materials that support the previously mentioned product. Each of the following documents is dedicated to digging into a specific topic:

* User stories – descriptions of the features included in the software product from the user’s point of view
* C4 Model Diagrams – architectural diagrams that describe the structure of the software system
* UX feedback report – a paper that reveals the appeal of the product to the targeted users and consists of a collection of tests, surveys and studies on a user’s behaviour while using the application
* Security report- document that provides information about the vulnerabilities, risks and possible threats of the software product and includes recommendations for a safe usage

The last component of the project is the *Code Quality*, which is a series of means that ensure the quality of the product throughout the development process. Subproducts of this are:

* Unit testing – automated tests that check that every unit of the code is functional
* End to end testing – test that ensures that the entire application, from start to finish, works according to the expectations
* Continuous Integration setup – the process of merging different pieces of code form multiple developers, having each change automatically tested in order to maintain code quality

# Project organisation

## Stakeholders and team members

*<<Indicate all stakeholders and team members for your project. For each stakeholder indicate the role for your project. Note that the role that a person has for your project is different from the function the person has. E.g., someone with the function “department manager of department X” can have the role of product owner for your project.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Abbreviation** | **Role and functions** | **Availability** |
| *Stacy Smith* | *S.S* | *Product owner* | *Available for handling in the final product* |
| *James Doe* | *J.D* | *Contact person* | *Available every 3 weeks for meetings* |
| *Bianca Cristea* | *B.C* | *Developer* | *Available for the entire duration of the project* |
| *Bart Rabeling* | *B.R* | *Consultant* | *Available for the entire duration of the project during workdays* |
| *Frank Coenen* | *F.C* | *Consultant* | *Available for the entire duration of the project during workdays* |

## Communication

*<< Indicate the meetings and other channels of communication that you have established, or that you use for your project. Think of communication with all stakeholders including company supervisor, teachers, etc.*

*In which manner does each communication take place? Think of the goals, the location (or whether it should be online), the timing and frequency, and the attendee list>>*

The channels of communication that are used along the duration of the project are *Outlook* (for emails)and *Microsoft Teams* (for direct messaging and online meetings). Regular meeting invitations are sent via *Outlook* every 3 weeks, along with an agenda for the topics that are discussed during the meeting. According to the availability of the parties, the meetings take place online, or at the following location:

***Address:*** *Rachelsmolen 1*

*Eindhoven*

*5612 MA*

Both parties have a contact person that will be available to answer any urgent matters for the entire duration of the project:

* **Client:**

Name: James Doe

Email address: [j.doe@contact.ngo.nl](mailto:j.doe@contact.ngo.nl)

Phone number: +31524256972

* **Consultants:**

Name: Bart Rabeling

Email address: [b.rabeling@fontys.nl](mailto:b.rabeling@fontys.nl)

Name: Frank Coenen

Email address: [f.coenen@frontys.nl](mailto:f.coenen@frontys.nl)

* **Developer:**

Name: Bianca Cristea

Email address: [b.cristea@student.fontys.nl](mailto:b.cristea@student.fontys.nl)

Phone number: +3166147028

# Activities and time plan

## Phases of the project

*<< Describe the main phases of your project. Even in a scrum project, you should specify at least the components at the beginning and end phases like problem analysis in the beginning, as well as handover, evaluation, reflection, and wrap up at the end.*

The development of the project is defined by a series of phases, starting from initiation and ending with a functional product. According to the startegy that is used, agile, the phasing steps will be repeaded every iteration until a final satisfactory product is met. The phasing components for this project are as it follows:

1. Problem analysis and design documentation
2. Software architecture and implementation
3. Testing and quality assurance
4. Client meetings (demo)
5. Handover
6. Reflection

## Time plan

*<< For a waterfall project you can indicate the phases and milestones below (can be adapted as required).*

*For an agile project, describe how the artefacts are planned. E.g., length of sprint (with justification), organization of stand up, demo, retrospective.*

*>>*

The phases of this project will be organised in sprints of a 3 week duration, each sprint ending in a meeting with the client where the current state of the product is presented.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Phasing** | | **Effort** | **Start date** | **Finish date** |
| **Sprint** | **Milestone** |  |  |  |
|  | Project initiation, defining a backend structure and base of frontend | 80 h | 2.09.2024 | 20.09.2024 |
|  | Functionalities for a caretaker’s account | 96 h | 23.09.2024 | 11.10.2024 |
|  | Functionalities for an elderly person’s account | 96 h | 14.10.2024 | 8.11. 2024 |
|  | Functionalities of a manager’s account | 96 h | 11.11. 2024 | 29.11. 2024 |
|  | Notification system and securing the environment | 96 h | 2.12. 2024 | 20.12. 2024 |
|  | Finalising the project | 96 h | 7.01.2025 | 24.01.2025 |

# Testing strategy and configuration management

## 

## Testing strategy

*<<Which testing strategy do you envision? E.g., on which levels will testing take place? Consider that you could choose unit, component, integration, system, or acceptance testing.*

*Justify your strategy, and also set goals where relevant. E.g., percentage code coverage for the relevant unit tests. For each of the planned tests, indicate what will be automated and what not.*

*Also think of quality testing setups like, e.g., Sonarqube.*

*>>*

For this project, the testing strategy that will be used is unit testing, and it will mainly be applied to the logic layer of the application.

At the same time, the project will include the testing setup Sonarqube, where more that 80% of the business layer should be covered, in order to ensure the quality of the application.

## Test environment and required resources

*<< Describe the test environment. E.g., do you envision a DTAP (Development, Testing, Acceptance, Production) environment. Can you make use of a CI/CD environment or will you develop your own?*

*It often helps to use a picture to visualize the test environment.*

*If you already know, describe which resources are required for realization and testing. Think of hardware, cloud environments and specific tooling required for development and testing.*

*>>*

For continuous deployment the software system willl make use of dockerfiles.

## Configuration management

*<< Describe the project approach with respect to version management (e.g. your GIT repository). This might include things like tooling, branching strategy, promotion-, release- and baseline strategy.*

*Also, when relevant, think of a mechanism to deal with change requests and problem reports.>>*

The management of this project will be done using the following strategy:

* Version control system:
  + GitLab – the platform that will host the repository of this project
* Branching strategy:
  + Main branch – the main branch that contains the stable version of the application
  + Development branch – a b ranch created every time a new feature is in the developmental phase, or for bug fixing

# Risk

## Risks

*<< Investigate and define all risks affecting the project. For each risk indicate what has been done, or will be done during the project, to prevent the risk from being actualized, and define the mitigation actions, such as what you plan to do if the risk actually eventuates. Think both from an organizational perspective about risks (e.g. sudden unavailability of the company mentor) and also from a content perspective (e.g. what happens if your research shows that it is a better to purchase an application than to develop it as a major part of your internship).*

*In a more elaborate version, you can also label the risks with their chance of occurrence and impact. The advice is to focus on risks that have both a real chance of eventuating and some considerable impact. Direct risks, like what to do if your company supervisor is not available anymore, should always be described, as they have happened in the past quiet regularly.*

*>>*

|  |  |  |
| --- | --- | --- |
| **Risk** | **Prevention activities** | **Mitigation activities** |
| 1. Hardware equipment damage | Storing a backup version of the project using a version control system (GitLab) | * Try to recover the project from the hard drive * Reconstruct the environment |
| 1. Dependency on third parties (APIs, libraries, etc.) | Ensuring that chosen external vendors are meeting the standards before using them and they are not deprecated | Replace dependencies with more suitable ones |