Slovak University of Technology in Bratislava
Faculty of Informatics and Information Technologies

VAVA
Project proposal
MessCode

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Vision

The application's goal is to make a private and effective communication system for a company. It will help with making the employers' and employees' communication more confidential and organised. By making it more organised, problem solving will improve and distributing work related tasks will be easier.

Usage Scenario

Lidli is a medium company that provides app development for customers. The company has an Owner that actively manages the company and its employees, 3 Project Managers and a dozen Developers. They all are included in different projects, and are focusing on improving their communication to prevent misunderstandings and accelerate development.

Up until now they have used Facebook's Messenger both for individual and group communication. The Owner fears that as the company grows, Messenger's options and features might not be enough anymore. He is also growingly concerned about privacy issues, and would like to move to a more private, customised app to communicate on. For a company that started working with important data, it is in his best interest to move to a safe environment.

Know your users

★ Employer

The Owner is always striving to help out the Project Managers and the Developers wherever he can. He has to have a form of contact to every employee, but does not like the current logistics of Messenger. He is always worried about forgetting to add a new employee on Messenger. He is also reluctant to move to other communication/chat apps, since most of them have a monthly-based payment system for additional features. Safety and privacy are issues as well that he wants to address, as he is planning to expand the company. Most of the time he is away from the office, but he makes sure to hop in for at least an hour every day to sort out offline things. Other times, his laptop is always by his side, and spends a couple of hours writing with his employees. As he likes to keep track of the projects' progress, he is included in all of the group chats. In case he notices some kind of problem or misunderstanding in a project he is able to immediately inform the Project Manager in charge.

★ Project Manager

Project Managers are focused on their assigned projects and teams. Once the Owner assigns a project to them, they invite colleagues to a group chat where most of the communication is going down. Currently there are 3 Project Managers. They use MessCode for assigning

respective tasks, inform & navigate team members and solve misunderstandings. This takes up a couple of hours from every work day. Throughout the different points of the project, they make sure to report to the owner and ask about additional tasks that might have come up.

★ **Employee**

Employees are responsible for the realisation of the project. This group of people need to know exactly what is happening on the project at any time. They spend most of their time in the office. They spend an hour or two each work day on the app to sort out project tasks. Whenever they are ready with their tasks, they report to their respective Project Managers.

Users language

★ **Chat**: an online room for texting

Both individual and group chats are very important. Employees can contact each other through simple chats anytime, without the need to "add" people first. Group chats are created by the Employer, where the Project Managers can add respective Employees there.

★ **Project**: a group of tasks to achieve a goal

The project has a handful of tasks associated with it, with a strict end goal in sight. It also has a deadline connected to it. Finished projects mean that respective group chats are no longer needed for it. Each project has a Project Manager and a couple of Employees assigned to it. Project Managers are usually assigned 1-2 projects at a time, but Employees can be assigned to any number of projects, depending on their field of work.

★ **Team**: a group of employees with a common project

Every team is assigned a single project. Whenever a project comes up, the Employer assigns the project to a Project Manager. The Project Manager then picks out the Employees needed for the tasks, thus creating the team.

Most common tasks

As an Employer, the owner wants to:

★ Constantly monitor projects and their group chats
★ Register new group chats for projects
★ Consult with Project Managers and Employees privately
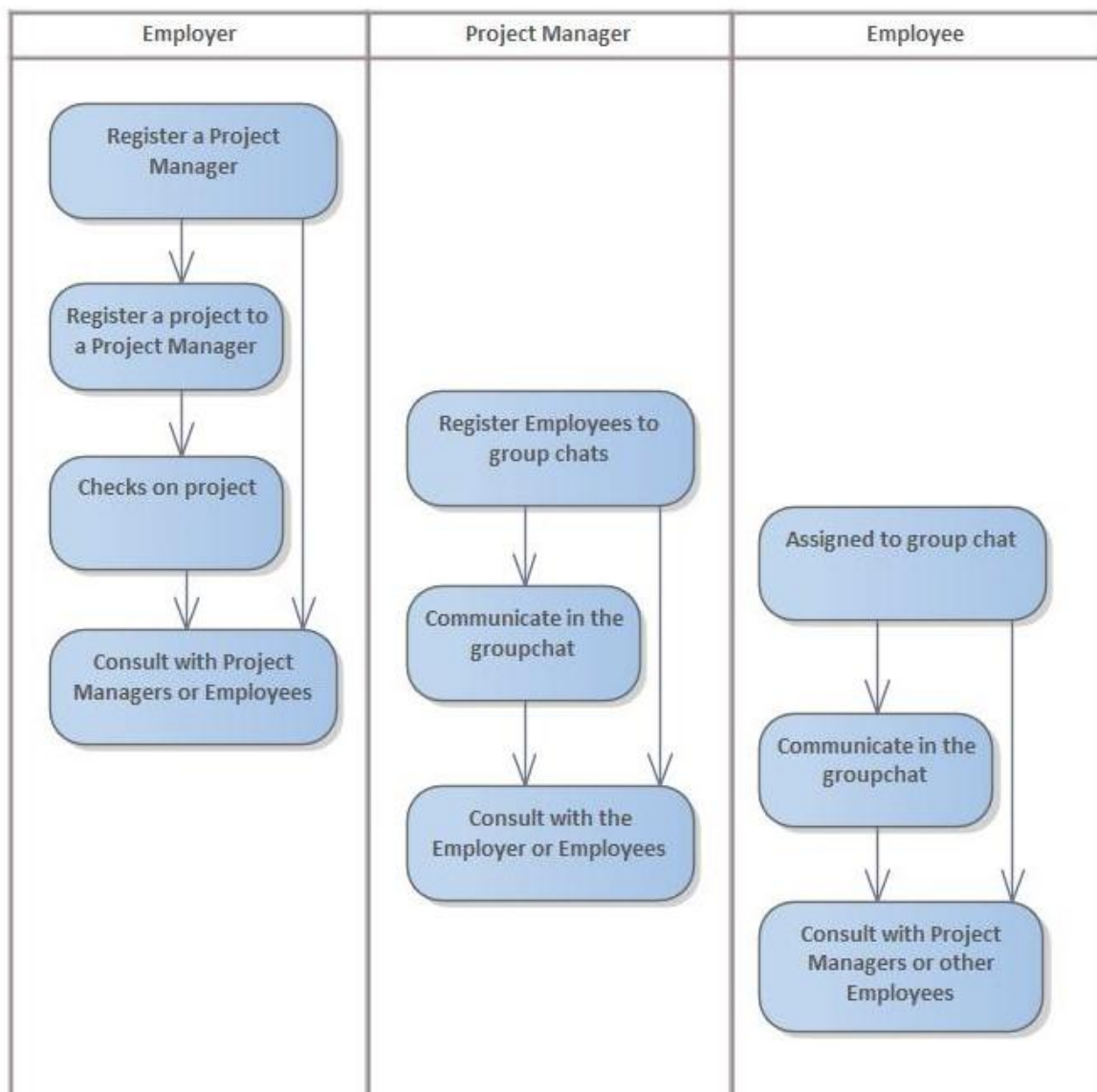★ Quickly register new Project Managers to the app

As Project Managers, they want to:

★ Constantly monitor the projects they are assigned to
★ Add new Employees to group cuts
★ Report to the Employer privately
★ Consult with Employees privately

As Employees, the developers want to:

★ Access group chats for their group projects
★ Report to the Employer or their Project Managers privately
★ Consult tasks with colleagues

Main Processes

Employer	Project Manager	Employee
Register a Project Manager		
Register a project to a Project Manager	Register Employees to group chats	
Checks on project	Communicate in the groupchat	Assigned to group chat
Consult with Project Managers or Employees	Consult with the Employer or Employees	Communicate in the groupchat
		Consult with Project Managers or other Employees

Navigation

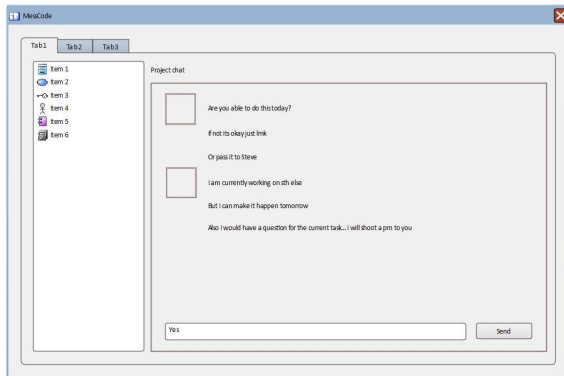At the start of the app, the customer would see the group chats. The group chats, individual chats and the profile / settings are available as tabs. After clicking on respective tabs, they see possibilities associated with the current tab.
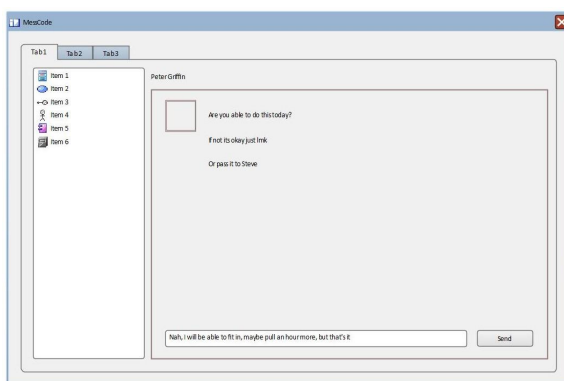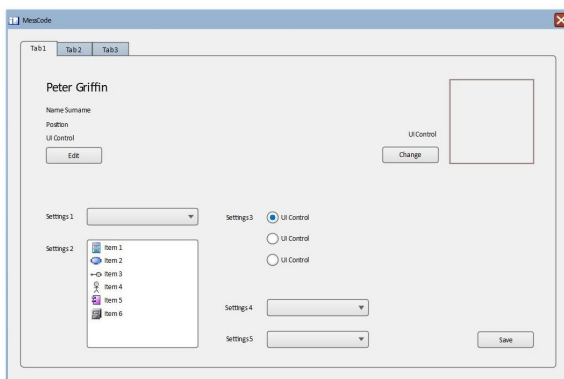
Mockups

Group chats tab

<table>
<tr><td>

MessCode   ✕

| Tab1 | Tab2 | Tab3 |

- Item 1
- Item 2
- Item 3
- Item 4
- Item 5
- Item 6

Project chat

Are you able to do this today?

If not its okay just lmk

Or pass it to Steve

I am currently working on sth else

But I can make it happen tomorrow

Also I would have a question for the current task... I will shoot a pm to you

Yes   Send

</td><td>

- List of group chats on the left
- Selected group chat of project
- Message sending

</td></tr>
</table>

Individual chats tab

<table>
<tr><td>

MessCode   ✕

| Tab1 | Tab2 | Tab3 |

- Item 1
- Item 2
- Item 3
- Item 4
- Item 5
- Item 6

Peter Griffin

Are you able to do this today?

If not its okay just lmk

Or pass it to Steve

Nah, I will be able to fit in, maybe pull an hour more, but that's it   Send

</td><td>

- List of chats with individuals
- Selected individual chat
- Message sending

</td></tr>
</table>

Profile / Settings tab

<table>
<tr><td>

MessCode   ✕

| Tab1 | Tab 2 | Tab3 |

Peter Griffin

Name Surname
Position
UI Control   UI Control
Edit   Change

Settings 1 [▼]   Settings 3   ● UI Control
                                             ○ UI Control
Settings 2   - Item 1   ○ UI Control
             - Item 2
             - Item 3   Settings 4 [▼]
             - Item 4
             - Item 5   Settings 5 [▼]   Save
             - Item 6

</td><td>

- Profile data
- Profile settings

</td></tr>
</table>

Non functional requirements

1. The system will be implemented in Java.
2. The database will be implemented in PostgreSQL, with JDBC to connect to the system.
3. The system will be a client-server system.
4. Messages sent by users must have a latency below 500ms

5. All messages will be encrypted.

6. Application will have localization for both english and slovak speaking workers.

7. Database will be SQL-Injection proof

8. Application will have an Easy&Understandable Interface.

9. Any errors will be logged.

10.The program will take up a maximum of 1 GB memory (Including logs and locally saved configurations).

11.The project will be developed in IntellIJ idea , in Maven project using Java version 11.0

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Trash:

List of actors

Actor	Description
Employer	Is able to view all the group chats. Can create group chats for projects (create projects), is able to add Project Managers and Employees to the application. Is able to add members to the group chat. Is able to contact everybody.

Project Manager	Is able to contact Employers through group chats, add new Employees to the group chat and contact everybody individually.
Employee	Is able to contact everybody, be it through group chat or individual chat.

Vision

The application's goal is to make a private and effective communication system for a company. It will help with making the employers' and employees' communication more confidential and organised. By making it more organised, problem solving will improve and distributing work related tasks will be easier.

Usage Scenario

The program will be used by medium to big companies who need privacy during their communication. For companies that work with important data such as names, addresses, orders, purchases, and documents. All of this data must be transmitted over a secure communication channel. This program is for the companies who are using online services for their information exchange but they are not satisfied with it.

Know your users

Employers

The leaders of the company need to keep check on the project's progress. In case they notice some kind of problem or misunderstanding in a project they should be able to immediately inform the project leader in charge.

Project leaders

Their role is to plan a project's realisation according to the employer's vision and navigate the other employees' work.

Employees

Employees are responsible for the realisation of the project, this group is hierarchically divided into smaller groups and their leaders. This group of people need to know exactly what is happening on the project at any time.

Where will it be used?

In offices of an IT company developing projects.

When will it be used?

It will be used in all scenarios when the company needs a private space to communicate online, be it scheduling meetings, addressing problems in development, sending sensitive information or just chatting with colleagues.

Why will it be used?

It is better than other alternatives like Messenger, because it is tailored for private use by a company rather than the general public.

How will it be used?

Members of the project will be able to effectively communicate with each other and their project leader.

Planned user types / User types and their privileges - maybe merge with "Know ur users"

Employer

- can create new employee accounts and delete them

- can create projects

- can assign project managers to projects

- can assign employees to projects

Project Manager

- can assign employees to his project
- can pass project management to employee
- can create private posts for project

Employee

- can chat with employees
- can participate in group chats of his assigned projects

Planned screens

- login screen

- dashboard ?

- chat rooms

- project page

- user page

- administration screen (for employers, making user logins etc?)