2.1 Understanding the needs of users

**F1) The ability to assess the places for fishing**

Appointment: Allows the user to evaluate the fishing place after his visit.

Description: The user should be able to evaluate a particular place, so that others understand whether to go there or not.

**F2) Registration via social networks**

Appointment: Accelerates the process of registering new users in the application.

Description: Because most people are in social networks, registration in this application via them simplifies the process of using

**F3) Selecting the range of the program**

Appointment: Specifies the maximum area of search for the nearest fish places.

Description: The user should be able to control the distance to potential fishing places.

**F4) Vision of the price of booking a place for fishing**

Appointment: Ability to see where the base is the most expensive / cheap place.

Description: The user must understand where and what price for the place, and in conjunction with the rating function he will be able to determine the best place that will meet the price-quality criterion.

**F5) Multilanguage**

Appointment: Support for different language settings.

Description: The application can be used by people of different nationalities.

**F6) Determining the current location**

Appointment: Possibility to determine the current location and nearby fish places.

Description: The application will allow the user to quickly determine the place for fishing.

**F7) Providing information about stores with fishing gear**

Appointment: Showing a list of shops with fishing gear.

Description: The user will be able to find the necessary devices for fishing, using for this much less time.

**F8) Providing information about nearby places to relax after fishing**

Appointment: Displays a list of places to relax after fishing

Description: The user will be able to find a place to relax after fishing, which is next to him.

**F9) Route to the place for fishing**

Appointment: Building a route from the current location of the user to the desired place for fishing

Description: The user can easily reach the desired fishing place, without wasting time searching for a possible route.

**2.2 Methods for identifying requirements**

There are 7 methods for identifying requirements: interviewing, questionnaires, meeting requirements, storyboards, precedents, role play, prototyping. Let's consider each of them in more detail.

**Questionnaire**

During the survey, the answers to the following questions were revealed: how often does a person go fishing, whether he knows good fishing places in his area, at what season people like to fish more, whether there are favorite fishing places. Also, is the user interested in using our application.

The questionnaire was conducted online. The questionnaire was attended by 111 people, the average age of which varies from 18 to 50. By time, the questionnaire took each participant for 5 minutes. The total time of the questionnaire is 20 days.

**Interviewing**

An interview was also conducted with a person who is directly related to the fishing industry.

During the interview, the following user needs were identified:

1. Interested in a product of this kind to save money and time.

2. The problem of independent finding of the path and geolocation.

3. The problem of choosing a store with a wide selection of fishing tackles.

4. The problem of finding a place for recreation after fishing.

**Meeting requirements**

**Preparatory materials for the meeting**

It is necessary to pre-send the preparatory materials in order to prepare the participants, as well as to increase the productivity of the upcoming meeting. Preparatory materials should stimulate both concrete and free thinking.

Kirill Shabalin, the leader of the team, was appointed the presenter of the meeting. His candidature was approved, because he has the necessary qualities:

• Is well acquainted with the process of holding the meeting;

• Demonstrates unrivaled abilities in reaching an agreement or creating a team;

• Its authority is recognized by internal and external team members;

• Energetic.

On the screen you can see an example of the timetable of our meeting.

**Creating ideas**

1. Automatically update the application once a month

2. Automatic geolocation detection

• Request a confirmation for geolocation

• Automatically determine geolocation without user confirmation.

3. Building a path to a fish place

• Building a path to a specific selected location

• Automatically build a path to all locations within range

4. Add fish shops to the database

• Do not add resources to the server part because of the high costs.

• Add, but in part, only the most popular ones

• Add everything to the maximum, with improvements to the server-side engine

5. Adding places to rest in the database

• Do not add resources to the server part because of the high costs.

• Add, but in part, only the most popular ones

• Add everything to the maximum, with improvements to the server-side engine

6. The radius of the function of finding fish places

• The circle of the entered radius around the current position of the user

• The inner part of a closed figure, where the vertices are marked with points on the map

7. Rating system

• Asking the user after fishing in a certain place to evaluate the quality of his products

• Once a month, a request to evaluate all sites visited

8. Expansion of the application to the whole territory of Europe

But we realized that not all ideas will be successful in implementation, so some of them had to be abandoned.

**Clipping Ideas**

At this stage, the following ideas were rejected:

• The idea of expanding the application to all countries in Europe, because it is very resource-intensive and requires an incredibly strong server side.

• The idea of automatic updating was rejected, as it may be inconvenient for a user.

• It was also decided to disable all background services, including automatic geolocation detection, at the user's request, as this consumes a lot of the user's battery life.

**Grouping ideas**

Ideas were divided into the following groups

1. Geography and location: (this item includes)

• The radius of the function of finding fish places

• Building a path to a fish place

• Automatic geolocation

2. Updating application content

• Rating system (request for evaluation by the user)

3. Optimization and expansion

• Adding fishing tackle stores to the database

• Adding places to rest after fishing in the database

**Prioritization**

Collective decision was made that after the main functionality of the application, i.e. takes geolocation of the client and obtains places for fishing in the adjacent region that the user can specify (search radius) ideas will be executed in the following order:

1. "Geography and location"

2. "Updating application content"

3. "Optimization and expansion"

If we describe more specifically, then the ideas will be fulfilled in the following order.

|  |
| --- |
| The vision of the most popular fishing place in its area |
| Determining the current location |
| Route to the fish place |
| Selecting the range of the program |
| Possibility to view fish equipment stores and places for rest |
| Multilanguage |
| Opportunity to leave comments |
| Registration via social networks |
| The cost of booking a fishing place |

Storyboard

2.2.4.1. WHO does - the element represents the users of the system / application, i.e. people who put our application on their device, they can interact with the application by contacting the graphical user interface.

2.2.4.2. WHAT does - directly our application. It responds to user actions with a graphical interface, listeners catch these actions and perform some other actions in response. For example, who (the user) pressed the button "show the route to the fish place", ie. sent an event to an application that the participant picked up on the event and responded to it with a route to the fish spot.

2.2.4.3. HOW it does - the application is built on client-server interaction. Using the search tools, geolocation definitions (Google API), the application provides the user with the choice and location of fish sites according to the established filters (criteria).

2.2.4.4. WHEN does - the real time of application use.

**Precedents. Description of the actors in the system**

Within the framework of our system, the actors are the store and the buyer and the programmer.

The application is one of the main actors of the system, since the developed application assumes the creation of a rating of fish places by the client. In addition, the application itself provides the necessary information about the locations in case of interest by this application.

The client is the main actor of the system. It is for its use that this project is being developed. The buyer will be available all the functions of the application, which will improve and speed up the process of finding fish places.

The programmer is the creator of the application. It interacts with the application most often: both at design time, and as a potential user, and after the release of the project in order to improve it.