Store and analyzing grades

Customer: Marko Pezer

Team:

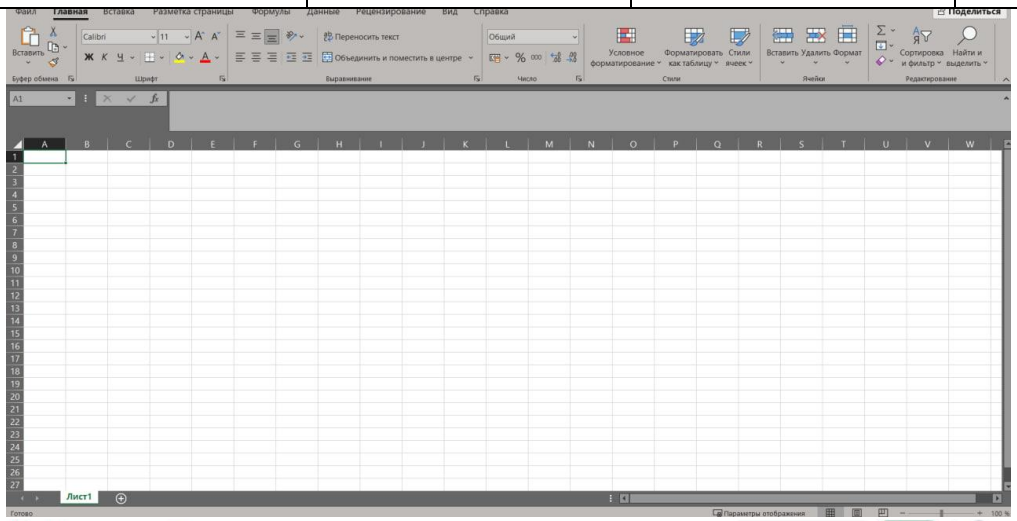
1. Artem Volkonitin – Leader, Project Manager, Front-end developer
2. Hamza Aldaghstany – Back-end and Front-end developer
3. Roman Pakhomov – Front-end developer, Designer
4. Vlad Vechkanov – Product manager, Back-end developer
5. Suleiman Karim Eddin – Back-end developer, System architect

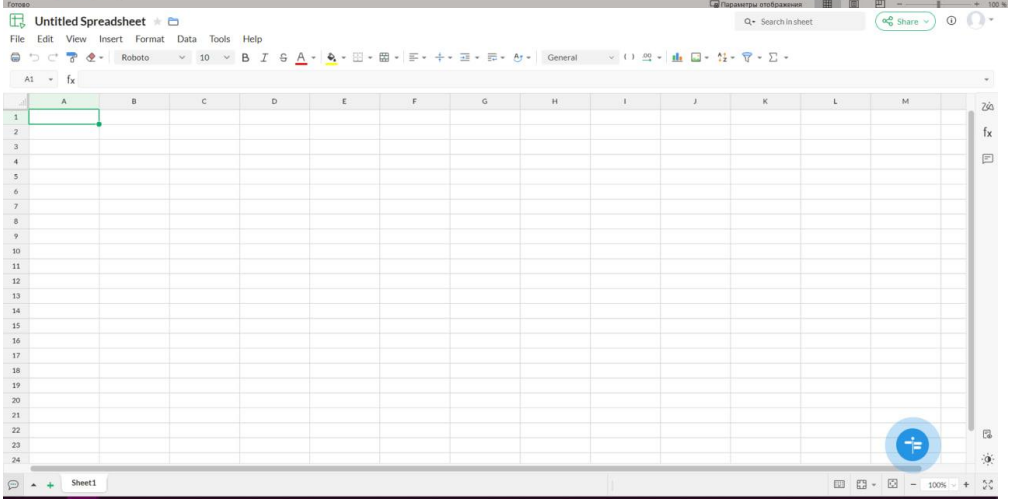
Audio record from interview:
https://drive.google.com/drive/folders/104a9RkTV2N8ed-jqGopQ5lRoQODd9yuL?usp=sharing

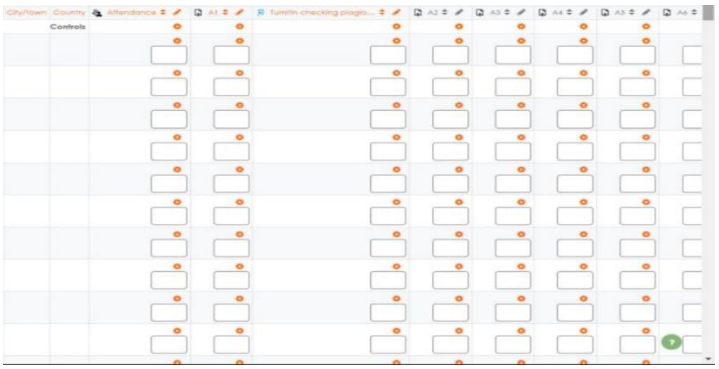
Interview Script

1. What problem should the project solve?
2. What methods or services did you use to solve this problem?
3. Why is this solution unsatisfactory for you?
4. Who will use the service?
5. Could you give a brief description of the project?
6. Could you provide some examples of the services that look similar to the result you want to get?
7. What type of app the project should be? (web-app, mobile app, etc.)
8. If it is a web-app, do you want to use it on computer, mobile phone or both?
9. What is the minimum functionality of the application you expect?
10. What should the service receive as input?
11. Should the service save the received data?
12. How users can log in to the service?
13. How the service should analyze grades?
14. Do you have a preference for the technologies or programming languages you use?
15. Do you have any design preferences?
16. Are there any features you would like to add?
17. What should not be in the project?

Qualitative analysis	Moodle	Excel	Zoho sheets
Free	+	+/-	+
Dynamically updated	+	-	-
Automatic grades analysis	+	-	-
User-friendly interface	-	+	+
Can be reused	+	-	-
Web-application	+	-	+







Interview notes

1. Implement a web application for quick and convenient student assessment

2. Add the ability to combine students into teams and evaluate both team work and individual work.

3. Add the ability to add bonus points

4. Grading is carried out as a percentage, excluding bonus points

5. Ability to save and export the table in csv or xlsx format

6. The input file is a csv table with constant fields

7. Add the ability to change assessment thresholds

8. It is necessary that the table is dynamically updated and it is possible to add new assignments

9. Need to make password protection

Goals and objectives

The main task of the project is to implement a service that allows you to easily and quickly evaluate the work of students on the course "Software Developing". The service must be dynamically updated according to the requirements of the course and have 2 types of assessments: team and individual. Also, the service will accept a table with some constant fields as input. The service will be used only for work on a computer, so there is no need to adapt it to different devices. During the interview, the customer offered us 2 options for the implementation of the project:

1. Script

2. Web application

Since the customer explained that the web application is more convenient for him, we chose the second option.

Web Application

For whom?

This service is designed to be used for only one course, so there is no need to register multiple accounts and support the collaboration function. In the future, the customer would like to add a function to add new users, but clarified that this is not a necessary part of the application. This application will be used only by course instructors, students will not have access to it.

Interface and functionality

The service should be able to download the initial data that was described above and upload the finished table with grades in the format csv or xlsx. The web application should also provide a dynamically updated table for grading students both in teams and individually, in addition, the ability to add bonus points should be implemented. Grading is carried out as a percentage, excluding bonus points The web application should read the final grade of students and be able to change the criteria for obtaining a particular grade. In addition, there should be a built-in analysis of estimates, which will later be agreed with the customer. In addition, the service should save intermediate result of grading, so it should be password protected.

Research results

As a result of the study, it became clear that none of the existing ways to implement this functionality is inefficient for the customer. The customer used Moodle and Excel spreadsheets. Moodle is an inefficient solution due to the inconvenient interface, there was a problem that after filling out the table, users forgot to save them.

Another problem is that Moodle has a large number of unused functions that interfere with fast and efficient work. Based on this, the new project will implement automatic data saving, as well as the minimum required interface. Excel is inefficient due to the fact that it does not have a built-in function for analyzing grades, this had to be added manually, also Excel spreadsheets are not dynamically updated and cannot be reused, as a result of which we will add the corresponding functions to our application. In addition, another service "Zoho sheets" was analyzed, which, although it is a web application, unlike Excel spreadsheets, does not have sufficient functionality.

Questions

At the moment, it is not clear what kind of grades analysis the customer expects, and also which fields the input table will contain. These and other questions will be addressed at future meetings with the customer.

Next steps

The next steps in the development of the service:

1. Think over the architecture of the project

2. Draw up a project development plan (roadmap)

3. Prototype the application

Soon we will provide the customer with a prototype of our web application and ask them to correct the direction of development.