ExpertFinder
App
Software Design Document

By:

Süleyman Furkan Öztürk

Enes Ayberk Balcı

Muhammed Berkay Yetiş

Eren Uçkun

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1. Introduction

This section explains the purpose of the software design document, the scope of the ExpertFinder software project, a brief overview of the document and the constraints of the project respectively.

1.1 Purpose

Idea of this application in order to be a solution to the problem of anyone who wants to receive services requires a hand of experts. Main purpose of our project is to enable people to access the services they need (plumber, locksmith, cleaner, etc.) more easily from a single application.

1.2 Scope

Today, many needs have arisen due to the developing technology and the increasing demand for services. We came up with the idea of this application in order to be a solution to the problem of anyone who wants to receive these services, with the increase in the search for the service they want to receive in the internet environment due to the fact that the service they want to receive is now easier and faster, and in order to deliver these services to users in a better quality and reliable way.

In addition, people who will provide these services will register on our platform and create a profile. People will determine the quality of the service provided by scoring after the service they receive, and the person providing the service will be rewarded by standing out in this way. In terms of developability, we thought to give more importance to security than its competitors. For example, after the service received, after scoring and commenting, we wanted to ask him to rate again after a certain time and get his average score. Thus, making the service permanent and sustainable would be a safer evaluation. Also, it would be a safer platform by asking experts in the field to record their mastery and journeyman certificates,

and by asking them to complete their profiles by querying the professional qualification certificate via e-government.

1.3 Constraints

The customers and experts who are members must confirm their membership with the e-mail sent by the system. It is assumed that the users are real authorized people.

2. System Overview

This section tells about the basis of the project and an overview of the platform and includes platform's context diagram

2.1 Base of the Project and General Overview

We determined the general course of our practice and conducted research according to the problems we experience in this area in our daily life and a problem and need that everyone we hear about is common.

This project is based on a mutually functioning online platform for both customers and experts. ExpertFinder is a mobile application-based online service platform. The platform is based on finding the services that need a hand of experts and also finding jobs by the people who are posting a job advertisement. It accepts users to register in two categories: customer and expert.

Customers can search for specified experts by filtering for their need(s).

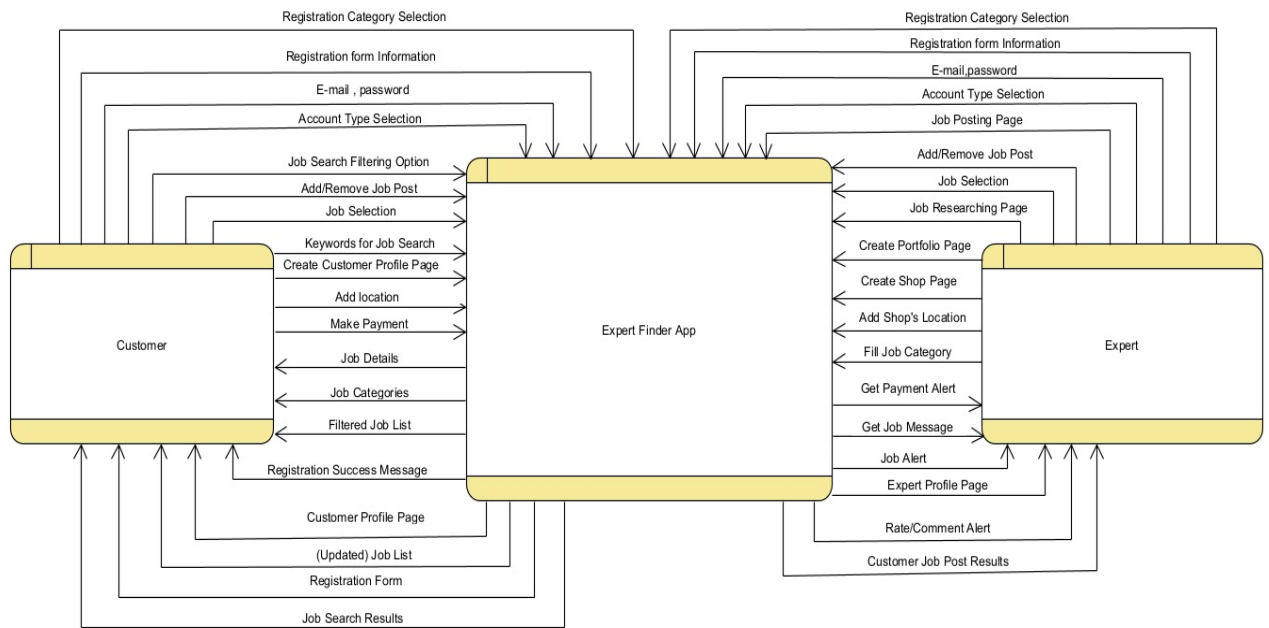Customers can post a job advertisements for their need(s).

Customers can rate and comment on the expert's work.

Experts can edit/change their work history and portfolio.

Experts can post a job advertisement for find a job.

Furthermore, the platform provides a messaging opportunity when after customer and expert matched.

2.2 Context Diagram

Registration Category Selection
Registration form Information
E-mail , password
Account Type Selection
Job Search Filtering Option
Add/Remove Job Post
Job Selection
Keywords for Job Search
Create Customer Profile Page
Add location
Make Payment
Job Details
Job Categories
Filtered Job List
Registration Success Message
Customer Profile Page
(Updated) Job List
Registration Form
Job Search Results

Customer

Expert Finder App

Registration Category Selection
Registration form Information
E-mail,password
Account Type Selection
Job Posting Page
Add/Remove Job Post
Job Selection
Job Researching Page
Create Portfolio Page
Create Shop Page
Add Shop's Location
Fill Job Category
Get Payment Alert
Get Job Message
Job Alert
Expert Profile Page
Rate/Comment Alert
Customer Job Post Results

Expert

3. System Architecture

This section includes level-0 data flow diagram and descriptions of the design components.

3.1 Descriptions of Design Components

3.1.1 Entity: Customer

The person who will register in the system and call a expert for the work to be done.

3.1.2 Entity: Expert

The person who will register to the system, will look for a job according to their skills and upload a portfolio.

3.1.3 Process 1: Register

Process 1 is the process of registration to the platform which takes user's personal information according to his/her registration category selection(user or expert) and saves them into Expert Finder Application database.

3.1.4 Process 2: Login

Process 2 is the process of log into the application. After verifying both of user's e-mail and password, a login success message is sent to the customer or expert. If the verification fails, the user receives a login fail message.

3.1.5 Process 3: Search for Expert

Process 3 is the process of the customer states the criteria of the job to be done (location, time interval, price) and opens a job posting to find a expert.

3.1.6 Process 4: Display Experts List

Process 4 is the process of the customer will be able to search for the expert customer wants according to his/her fields of expertise and see it on his/her screen.

3.1.7 Process 5: Rate/Comment

Process 5 is the process of after the work is done, customers will be able to rate and comment on the work of the expert.

3.1.8 Process 6: Display the Expert's Rate/Comment

Process 6 is the process of the rated job will appear on the expert's profile.

3.1.9 Process 7: Send/Receive Messages

Process 7 is the process after the job offer is accepted, it will be possible to send and receive messages to establish the connection.

3.1.10 Process 8: Add Job Post

Process 8 is the in order for customers to choose the expert who will do the work more easily, the experts will show the work they can do and share posts to find a job more easily.

3.1.11 Data Store D1: ExpertFinder Database

ExpertFinder database is the data store containing all of user and item related information and the connections between the data elements.

3.2 Data Flow Diagram

The following diagram, level-0 data flow diagram, shows the major subsystems, data repository and their interconnections.
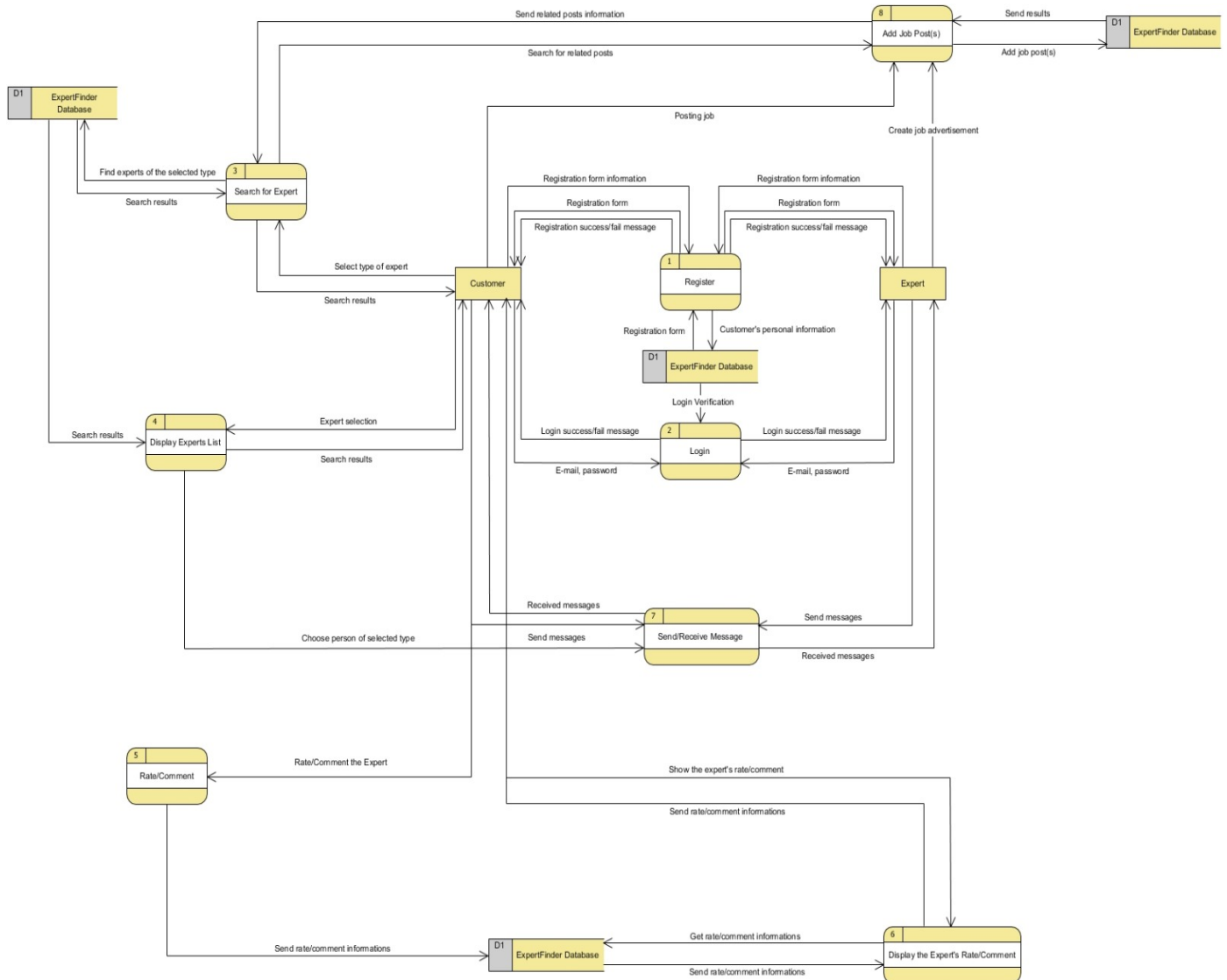
4. Data Design

This section clearly describes the functionality of the platform.

4.1 Functions

F1. Any user can register in two categories: expert and customer.
F2. Type of expert user willing to register fills the expert form.
F3. Type of customer user willing to register fills the customer form.

4.1.1 Log In/Out

F5. Registered user can log in by supplying his/her e-mail address and password.
F6. Logged in user can log out.

4.1.2 User profile

F7. Logged in user can edit/change his/her personal information.
F8.A customer can give stars/comments to expert profile.

4.1.3 Post

F9.A customer can post job advertisement.
F10 An expert can post open to work what the expert can do works.

4.1.4 Editing Post

F11. Any user can edit her/his posts.
F12. Any user can remove her/his posts.

4.1.5 Viewing Items

F13. Any user can see the most recently added items on homepage.
F14. Any user can expand the details of any item on the platform.

4.1.6 Searching

F13. Any user can search for a job by typing one or more keywords.

4.1.7 Messaging

F15. Logged in user can create/send a message to another user.
F16. Logged in user can view received messages in his/her message list.
F17. Logged in user can reply any received message.
F18. Logged in user can delete messages from his/her message list.

4.2 Data Restrictions in Registration Forms

4.2.1 Registration Form for Customer

- Adı: Text, letters only.
- Soyadı: Text, letters only.
- Telefon Numarası: Numbers only.
- E-posta: English letters, numbers and the characters ".", "-", "_", "@", "+".
- Şifre: Any character.
- Adres: Letters, numbers and characters ".", ",", "-".

4.2.2 Registration Form for Expert

- Adı: Letters only.
- Soyadı: Letters only.
- İş kategorisi: Text,letters only
- Telefon Numarası: Numbers only.
- E-posta: English letters, numbers and the characters ".", "-", "_", "@", "+".
- Şifre: Any character.
- Adres: Letters, numbers and characters ".", ",", "-".

4.3 Entity-Relation Diagram

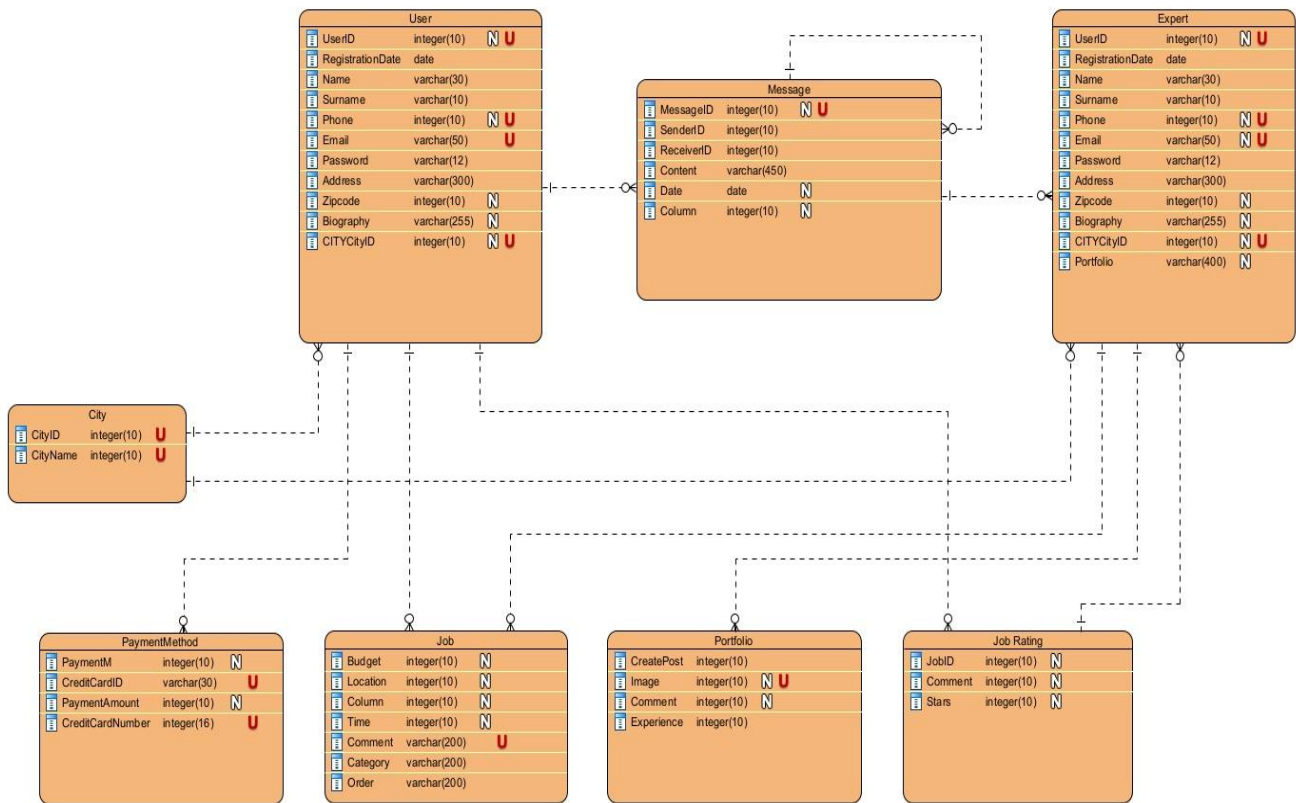The following diagram (Figure 3) shows the relationships of entity sets stored in the database of ExpertFinder app.

Figure 3: Entity-Relation Diagram

5. User Interface Design

This section briefly describes user interface and pages.

5.1 Homepage

Homepage will contain items such as job posting search button, profile page, settings, messages, login buttons.

5.2 Search Menu

Under the search button, there will be sorting and search criteria such as the category of the job searched, the salary range, and the address.

Jobs will appear according to the search criteria and with sorting options.

5.3 Registration

Customers and experts will be able to register from the register button on the homepage.

After choosing the membership type (there will be separate account types for two users), they will be able to register by filling out the specified registration options.

5.4 Log In/Out

The user can register by clicking on "Login" button placed below the main menü.

The logged in user logs out by clicking on "Log Out" button placed below the static main menu.

5.5 User Profiles

Members will be able to access and edit their own pages from the profile page on the home page.

Experts will also shape profile pages as portfolios on the profile page, which has separate options for customers and experts.

5.6 Searching for a Job

Customers will use the job search button on the homepage to search for a job, and experts will use it to post job postings.

5.7 Message Button

In the process of accepting the job posting for both parties, the parties will be able to send a message to each other with the message button and convey the necessary extra details.

5.8 Messaging

The logged in user can view, create and delete the messages in "Messages" page that can be reached "Messages" button placed on homepage.

5.9 Contact

The articles to be written to the application support team for complaints and suggestions will be placed at the bottom of the main page, again in the form of a message.

6. Testing

The following table shows the test cases and expected outputs to apply in testing phase of the project.

ID	Test Case	Expected Output
T1	Go to registration page, select 'Usta olarak Kaydol.	View registration form for Expert.
T2	Go to registration page, select 'Müşteri olarak kaydol'.	View registration form for Customer.
T3	Go to registration page, select 'Usta, fill the registration form for granter, click on 'Kayıt ol'.	- If one or more of the entered data is/are not in the desired data type, then see error message. - If all valid, then view the log in page.
T4	Go to registration page, select 'Müşteri, fill the registration form for grantee, click on 'Kayıt ol'.	- If one or more of the entered data is/are not in the desired data type, then see error message. - If all valid, then view the log in page.
T5	Go to log in page, enter e-mail and password, click on 'Giriş Yap'.	- If any of the entered data is not valid, then see error message. - If both are valid, then view the homepage as logged in.
T6	When logged in, click on 'Çıkış Yap'.	- Go to welcome screen as logged out.
T7	When logged in, go to 'Profil' page, click on 'Düzenle'.	- View user information as a form.
T8	When logged in, go to 'Profil' page, click on 'Düzenle', edit one or more information, click on 'Kaydet'.	- If one or more of the updated data is/are not in the desired data type, then see error message. - If all valid, then view user information - with updated information.

T9	Go to homepage.	- View the posted job advertisements.
T10	Expert post open to work any job.	- That post can be found by any user.
T11	Select one of job types	View the related jobs.
T12	Click on 'İş Ara', type keyword(s) such as "Elektrikçi", "Su tesisatı" and so on, click on magnifier.	View the experts including the keyword(s) as their information.
T13	After logged in, go to messages page to expert, click on 'Mesaj gönder'.	View a form for messaging.
T14	After logged in, go to messages page.	View messages page.
T15	After logged in, go to messages page, click on 'Mesaj gönder', enter e-mail of the receiver and a message, click on 'Gönder'.	- If the e-mail does not exist in database or entered message is empty, then see an error message. - If the e-mail exists in database and entered message is not empty, then view a success message and an unread message in receiver message list.
T16	After logged in, click 'Post job advertisement'	- View posting job advertisement form.

7. System Development Environment

This section includes hardware and software tools that will be used during all phases of the project.

7.1 Hardware

The following hardware is planned to use:

➢ Dell 7567 Inspiron 15 7000 gaming, 8GB RAM, Intel Core i5-7300HQ CPU (2.50GHz x4)
➢ Huawei Matebook D15, 16GB RAM, Amd Ryzen 7 3700U (2.3GHz x8)
➢ Desktop Computer, 32GB RAM, Amd Ryzen 7 3800X (3.90GHz x8)
➢ Desktop Computer, 16GB RAM, Amd Ryzen 5 3600 (3.60GHz x6)

7.2 Software Tools

➢ Room Database:
A relational database management system developed for local.

➢ Firebase:
A relational database management system developed for online.

➢ Intellij Idea Community Edition:
A compiler and an IDE for application programming.

➢ Notepad++:
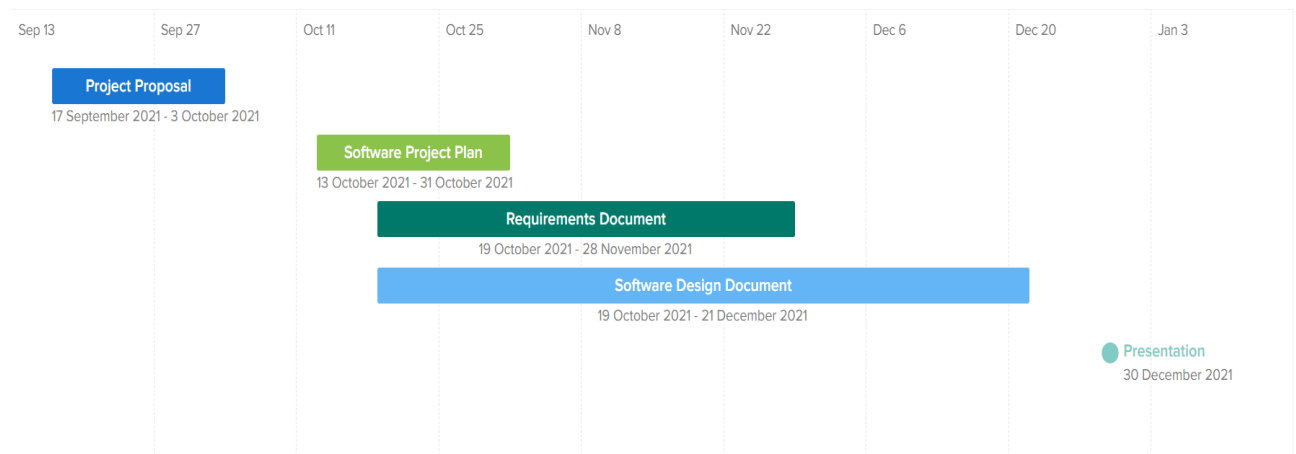A text editor and source code editor for use with Microsoft Windows.

➢ Selendroid:
A portable software-testing framework for android applications.
➢ Google Docs and Microsoft Office:
Online and offline documenting tools.

8. Timeline

Figure shows the estimated timeline of the project.

Project Timeline