SE 315 SOFTWARE PROJECT MANAGEMENT

Fast Journey

Software Development Plan

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Outline

1. OVERVIEW

Fast Journey is a project that manages travel affairs. It simplifies to purchase, search, have information for travels tickets.

A software project that allows people easily buy tickets internet without going to the sales points to make people's busy lives easier, save time and access more relevant search results. The project is being undertaken to provide a fast, easy and best price with comparative tickets to user.

In this document, details will be explained: Requirements, Stakeholders, Project Staffing, Software Process Model, Schedule and Effort, Measurements, Project Risks, Software Tools, Project Needs, GUI presentation.

2. OBJECTIVE

Objective of this project is assembling travels sector in one place and making travel affairs easier. The project will provide you:

- To buy tickets from different travel areas
- To do operations in a fast way
- To compare tickets' prices
- Smooth shopping experiences
- To choose the right trip for you.

3. HIGH-LEVEL FUNCTIONALITY

3.1 Requirements

3.1.1 Functional Requirements

- To buy ticket, users need to sign up.
- Users can buy tickets at different areas (such as flight, bus etc).
- There will be sign for verified accounts.
- Announcements for events.

- Users can make rezervation and cancel them.
- Different options to pay
- Users can transfer their tickets to other people.
- Users can search tickets using restrictions
- Users can compare tickets between each other
- You can chat with the sellers

3.1.2 Non-Functional Requirements

- Tests for program reliability.
- Database will support up to 2,5 millions users.
- Users can not sign up Fast Journey if they are under 18.
- For privacy, users can not display another users which is not their friends.
- For a good usability, we prepare a survey to gather feedback from users.
- For the security, users password contain capital and lower case, numbers and special characters with a condition that each password contain at least 10 characters.

4. STAKEHOLDERS

There are nine types of stakeholders in this project:

- Investors
- Creditors
- Communities
- Trade Unions
- Employees
- Governments
- Partners
- Customers
- Internal Stakeholders

4.1. Investors

The owners of a business. Investors typically have a right to accurate and timely information such as regular financial statements.They may also have the right to approve or reject decisions such as mergers & acquisitions.

4.2. Creditors

The creditors of a business typically have rights such as access to accurate and timely financial information.

4.3. Communities

The communities that are impacted by your business. For example, your impact on the quality of life, environment and economy of a city.

4.4. Trade Unions

Trade unions may be informed and consulted about things such as worker safety.

4.5. Employees

Employees and other individual contributors to your organization.

4.6. Governments

Governments agencies such as regulatory bodies and taxation authorities.

4.7. Partners

Partners such as suppliers and distribution partners.

4.8. Customers

Customers who depend on your products and services.

4.9. Internal Stakeholders

Internal stakeholders are stakeholders by virtual of their role in your organization. For example, your board of directors, executive managers, auditors, business units, internal customers, operations teams, subject matter experts and users.

5. PROJECT STAFFING

There will be eight types of project staff: a software project manager, a requirements engineer, a lead designer, a tool specialist, a documentation specialist, coder and testers.

- **Software Project Manager:** Software project manager is responsible for planning and scheduling the project, managing the team members and etc. The owner of this task is Neslihan Özgün.
- **Requirements Engineer:** Requirements engineer is responsible for identifying the stakeholders getting the requirements from the customers, elicitating, analyzing and documenting the software requirements. The owner of this task is Orkun Hacılar.
- **Lead Designer:** Lead designer is responsible for understanding design paradigms, specifying and explaining system architecture, implementing portions of the design, troubleshooting design and implementation problems. The owner of this task is Orkun Hacılar.
- **Tool Specialist:** Tool specialist is responsible for understanding and troubleshooting possibly complex software installation and configuration, producing, distributing and explaining user information about software tools, reacting to critical and stressful software problems on short notice. The owner of this task is Selçuk Talha Kul.
- **Documentation Specialist:** She will have the responsibility of maintenance of company documents. They are responsible for storage, cataloging and retrieval of documents. They maintain the integrity of working documents and update documentation when revised. The owner of this task is Neslihan Özgün.
- **Coder:** Coder is responsible for understanding design documentation, system architecture and design decisions, coding, knowledge and understanding of development environment. The owner of this task is Berk Muslu.
- **Testers:** Testers are responsible for the test planning and preparation phases of the testing, reviewing and contributing to test plans. Testers execute the tests, evaluate the results and document problems found. They monitor the testing and the test environment, often using tools for this task, and often gather performance metrics. The owners of this task are Berk Muslu and Selçuk Talha Kul.

6. SOFTWARE PROCESS MODEL

In this project, waterfall development process is going to be used:

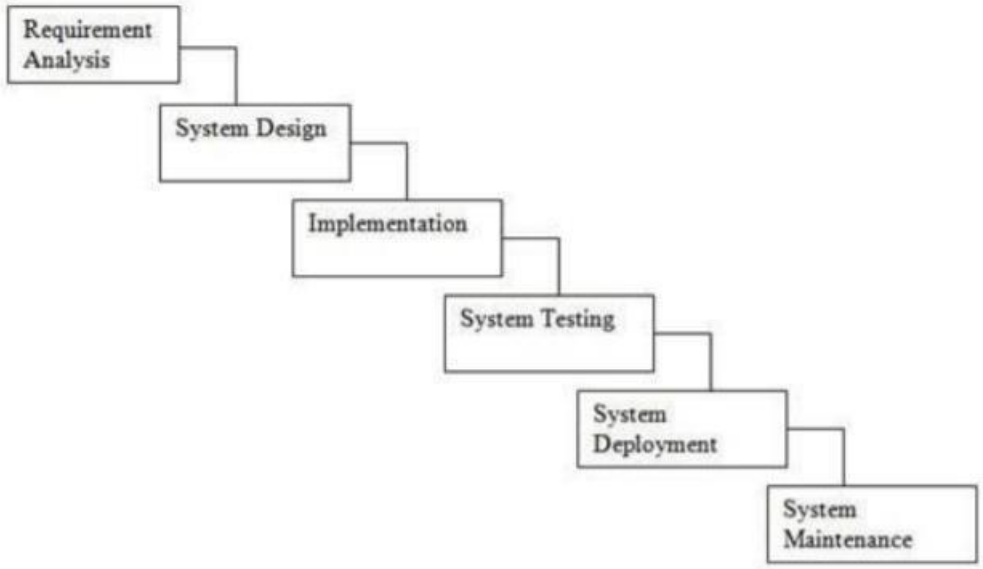


Figure 6.1: Waterfall Development

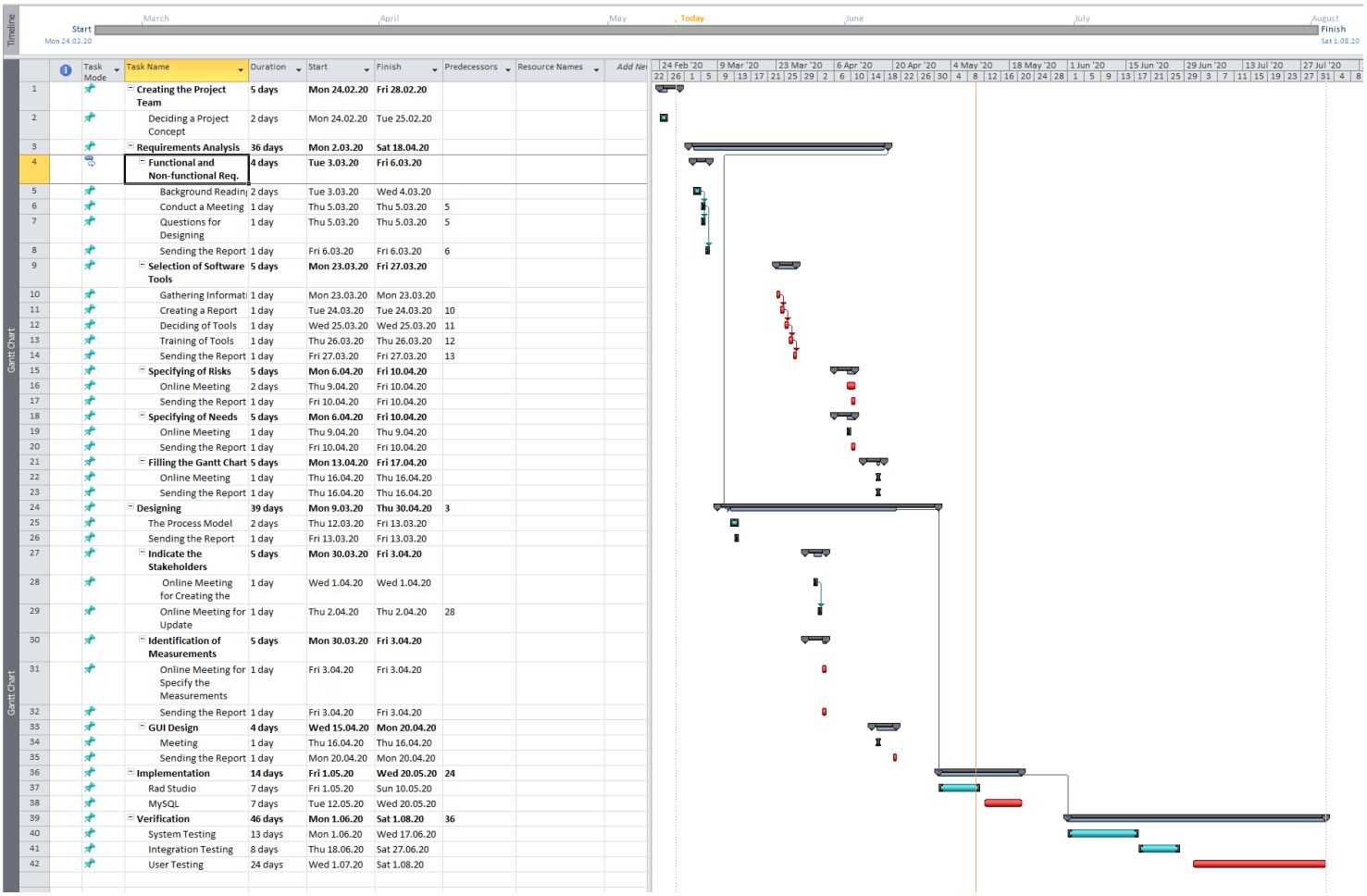
The Waterfall Model was first Process Model to be introduced. It is also referred to as a linear-sequential life cycle model. It is very simple to understand and use. In a waterfall model, each phase must be completed fully before the next phase can begin. This type of software development model is basically used for the project which is small and there are no uncertain requirements.

The reason to choose the waterfall model because we are beginners and we can be confused while developing step. Without a good documentation, problems can go somewhere that we can not solve. Otherwise, we find appropriate the model and there is no reason to not choose the waterfall.

7. SCHEDULE AND EFFORT

A schedule has a list of a project's with intended start and finish dates in software project management. It is the most crucial part of a software development process. A good schedule helps leading to a quickly completed and qualified product.

Detailed project schedule of the project is given below:



	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1		**Creating the Project Team**	**5 days**	**Mon 24.02.20**	**Fri 28.02.20**		
2		Deciding a Project Concept	2 days	Mon 24.02.20	Tue 25.02.20		
3		**Requirements Analysis**	**36 days**	**Mon 2.03.20**	**Sat 18.04.20**		
4		**Functional and Non-functional Req.**	**4 days**	**Tue 3.03.20**	**Fri 6.03.20**		
5		Background Readin	2 days	Tue 3.03.20	Wed 4.03.20		
6		Conduct a Meeting	1 day	Thu 5.03.20	Thu 5.03.20	5	
7		Questions for Designing	1 day	Thu 5.03.20	Thu 5.03.20	5	
8		Sending the Report	1 day	Fri 6.03.20	Fri 6.03.20	6	
9		**Selection of Software Tools**	**5 days**	**Mon 23.03.20**	**Fri 27.03.20**		
10		Gathering Informat	1 day	Mon 23.03.20	Mon 23.03.20		
11		Creating a Report	1 day	Tue 24.03.20	Tue 24.03.20	10	
12		Deciding of Tools	1 day	Wed 25.03.20	Wed 25.03.20	11	
13		Training of Tools	1 day	Thu 26.03.20	Thu 26.03.20	12	
14		Sending the Report	1 day	Fri 27.03.20	Fri 27.03.20	13	
15		**Specifying of Risks**	**5 days**	**Mon 6.04.20**	**Fri 10.04.20**		
16		Online Meeting	2 days	Thu 9.04.20	Fri 10.04.20		
17		Sending the Report	1 day	Fri 10.04.20	Fri 10.04.20		
18		**Specifying of Needs**	**5 days**	**Mon 6.04.20**	**Fri 10.04.20**		
19		Online Meeting	1 day	Thu 9.04.20	Thu 9.04.20		
20		Sending the Report	1 day	Fri 10.04.20	Fri 10.04.20		
21		**Filling the Gantt Chart**	**5 days**	**Mon 13.04.20**	**Fri 17.04.20**		
22		Online Meeting	1 day	Thu 16.04.20	Thu 16.04.20		
23		Sending the Report	1 day	Thu 16.04.20	Thu 16.04.20		
24		**Designing**	**39 days**	**Mon 9.03.20**	**Thu 30.04.20**	**3**	
25		The Process Model	2 days	Thu 12.03.20	Fri 13.03.20		
26		Sending the Report	1 day	Fri 13.03.20	Fri 13.03.20		
27		**Indicate the Stakeholders**	**5 days**	**Mon 30.03.20**	**Fri 3.04.20**		
28		Online Meeting for Creating the	1 day	Wed 1.04.20	Wed 1.04.20		
29		Online Meeting for Update	1 day	Thu 2.04.20	Thu 2.04.20	28	
30		**Identification of Measurements**	**5 days**	**Mon 30.03.20**	**Fri 3.04.20**		
31		Online Meeting for Specify the Measurements	1 day	Fri 3.04.20	Fri 3.04.20		
32		Sending the Report	1 day	Fri 3.04.20	Fri 3.04.20		
33		**GUI Design**	**4 days**	**Wed 15.04.20**	**Mon 20.04.20**		
34		Meeting	1 day	Thu 16.04.20	Thu 16.04.20		
35		Sending the Report	1 day	Mon 20.04.20	Mon 20.04.20		
36		**Implementation**	**14 days**	**Fri 1.05.20**	**Wed 20.05.20**	**24**	
37		Rad Studio	7 days	Fri 1.05.20	Sun 10.05.20		
38		MySQL	7 days	Tue 12.05.20	Wed 20.05.20		
39		**Verification**	**46 days**	**Mon 1.06.20**	**Sat 1.08.20**	**36**	
40		System Testing	13 days	Mon 1.06.20	Wed 17.06.20		
41		Integration Testing	8 days	Thu 18.06.20	Sat 27.06.20		
42		User Testing	24 days	Wed 1.07.20	Sat 1.08.20		

Figure 7.1: Schedule and Gantt Chart of the Project

8. MEASUREMENTS

Project measurements needed to be contained are below:

- **Schedule and Effort:** This is given in detail at schedule and efforts section already.
- **Code Quality:** Statistics of defect report are categorized and calculating.
- **Financial Risk:** Statistics are examined and interpreted using statistical learning.
- **Technical Debt:** Comparison of the days we spent with old process, the day we will spend with new process, and both of starting, ending days.
- **Project Cost:** We consider sources spent as time, money, effort for calculation cost.
- **Documents:** Documents are collected each week and finally they are assembled in this document.

9. PROJECT RISKS

9.1. Likelihood Risk List

LIKELIHOOD RANK	RISK DESCRIPTION
1	Exceeding deadline due to inefficient using of time log
2	Budget shortage
3	Lack of sponsors and advertising
4	Low morale of developers: It cause break timing and process. Therefore the project may not fit the deadlines.
5	Changing of requirements: Some requirements may be hard to change and developers may find it painful.
6	Being back due to outshine rival applications
7	Database crash probability due to overload, hacking etc.
8	The rivals' unethical attempts such as making bots that give low votes.
9	Risk of impossibility that making an update
10	Dispute with partners
11	Salary shortage
12	Risk of failure
13	Bankruptcy

9.2. Impact Risk List

IMPACT RANK	RISK DESCRIPTION
1	Bankruptcy
2	Database crash probability due to overload, hacking etc.
3	Exceeding deadline due to inefficient using of time log
4	Low Morale of developers: It cause break timing and process. Therefore the project may not fit the deadlines.
5	Budget shortage
6	Dispute with partners
7	Lack of sponsors and advertising
8	Changing of requirements: Some requirements may be hard to change and developers may find it painful.
9	Being back due to outshine rival applications
10	The rivals' unethical attempts such as making bots that give low votes.
11	Risk of failure
12	Salary shortage
13	Risk of impossibility that making an update

9.3. Combined Risk List

LIKELIHOOD RANK	IMPACT RANK	COMBINED RANK	RISK DESCRIPTION
1	**3**	**4**	Exceeding deadline due to inefficient using of time log
2	**5**	**7**	Budget shortage
4	**4**	**8**	Low Morale of developers: It cause break timing and process. Therefore the project may not fit the deadlines.
7	**2**	**9**	Database crash probability due to overload, hacking etc.
3	**7**	**10**	Lack of sponsors and advertising
5	**8**	**13**	Changing of requirements: Some requirements may be hard to change and developers may find it painful.
13	**1**	**14**	Bankruptcy
6	**9**	**15**	Being back due to outshine rival applications
10	**6**	**16**	Dispute with partners
8	**10**	**18**	The rivals' unethical attempts such as making bots that give low votes.
9	**13**	**22**	Risk of impossibility that making an update
11	**12**	**23**	Salary shortage
12	**11**	**23**	Risk of failure

10. SOFTWARE TOOLS

Software tools are chosen according to the comparison graph. As an example for one of the chosen tools are as follows:

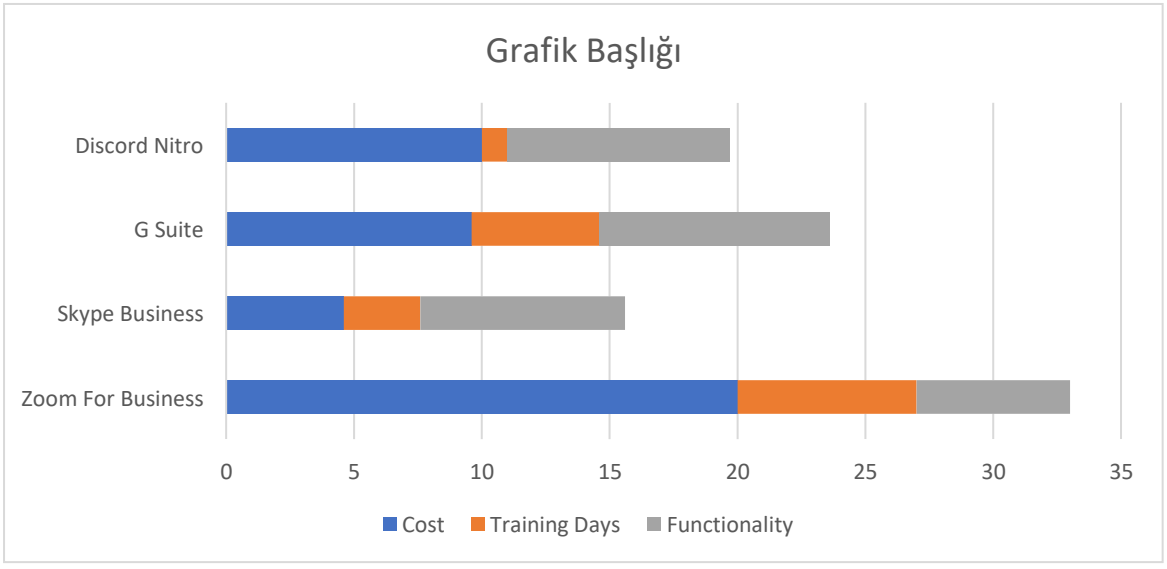
10. 1. Tool Cost/Training/Functionality Data

Tool	Discord Nitro	G Suite (Google Meet)	Skype Business	Zoom For Business
Cost/per Month	10$	9.6$	4.6$	20$
Training Days	1	5	3	7
Functionality	8.7	9	8.0	6.0

10. 2. Normalized Cost/Training/Functionality Data

Tool	Discord Nitro	G Suite (Google Meet)	Skype Business	Zoom For Business
Cost	50	48	23	100
Training Days	14.28	71.42	42.85	100.0
Functionality	96.66	100	88.88	66.66

10. 3. Normalized Tool Graph



As a result Discord Nitro is the most appropriate software tool for the communication. Because most of us familiar with Discord and we have a limited time to learn another program to communicate.

10.4. Additional Tools

- **Discord Nitro** is the premium subscription tier of the most popular gaming chat service in the world. It comes with global access to custom emojis from all the channels you're part of, a custom Discord number tag, animated avatars, and server boosts for your favorite communities.
- **MySQL,** the most popular Open Source SQL database management system, is developed, distributed, and supported by Oracle Corporation.
- **Rad Studio** is an integrated development environment (IDE) for building Win32 applications. The RAD Studio IDE provides a comprehensive set of tools that streamline and simplify the development life cycle.

11. PROJECT NEEDS

11.1. Software Needs

- **Operating Systems:** Windows 10
- **IDE:** Rad Studio 10.3
- **Code Libraries:** RX, IPWorks (Delphi)
- **Software Tools:** Google Meet, MySQL
- **Email Systems:** Gmail

11.2. Hardware Needs

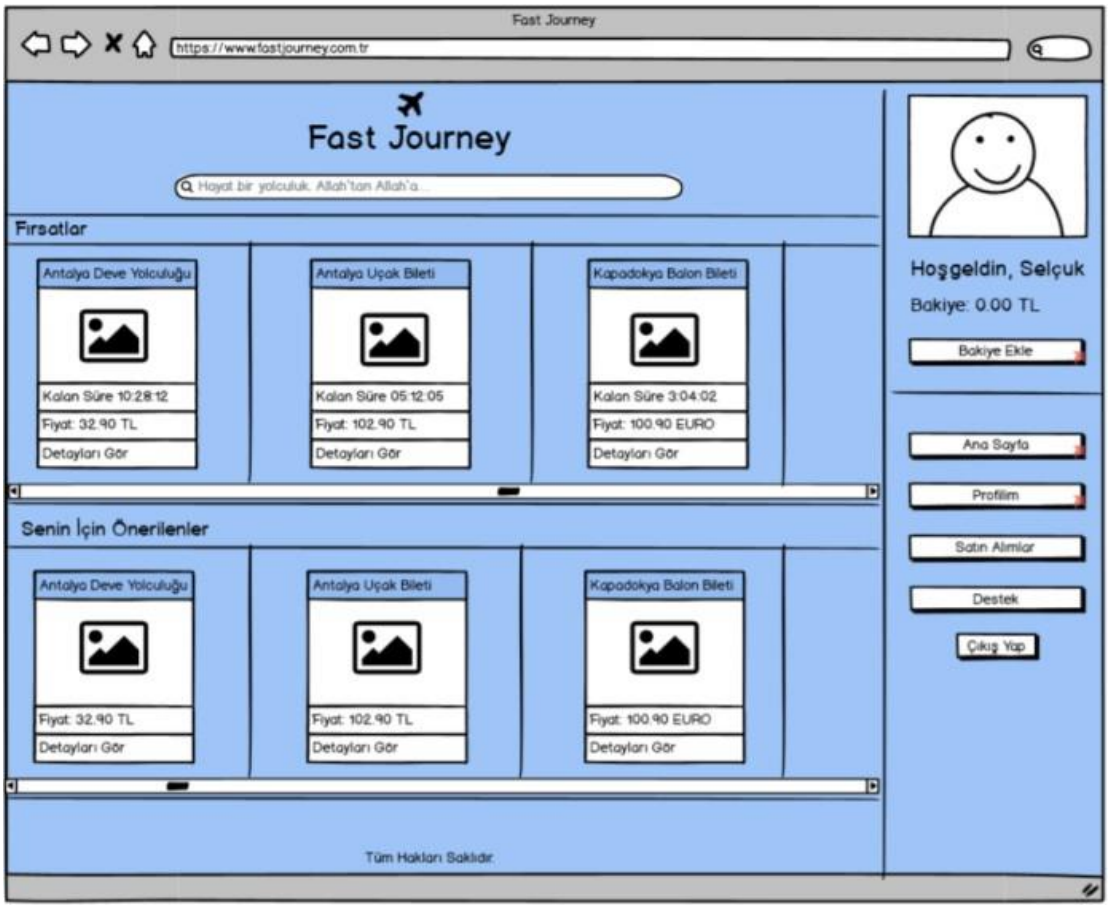
- **Computer:** Each developer has own computer.
- **Data Storage Unit:** WD Elements 10TB 3.5
- **Wireless Router:** Zyxel WRE6602
- **Printer:** Canon G3400

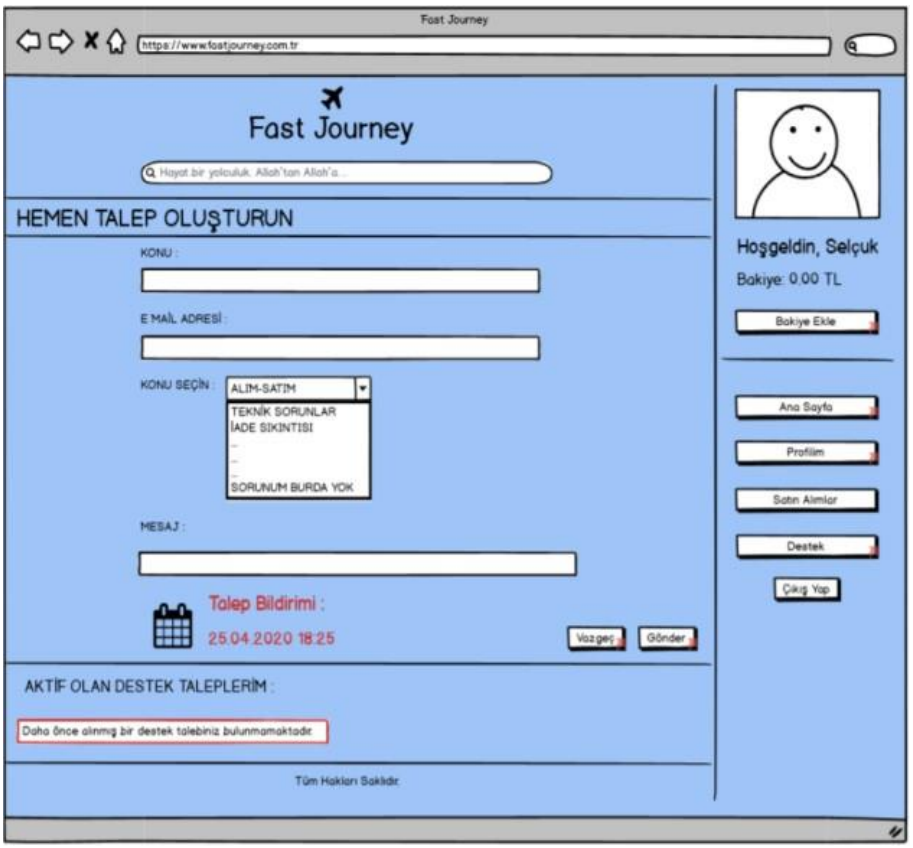
11.3. Support Needs

- **Travelling Companies:** Success of this project helps these companies so they should support us.

- **Tour Companies:** Success of this project helps these companies so they should support us. They can provide travel destination, tour programs for customers and etc.
- **Donators:** Donators should support us financially.
- **Sponsors:** Sponsors support us financially. They can provide travel destination.

12. GRAPHICAL USER INTERFACES

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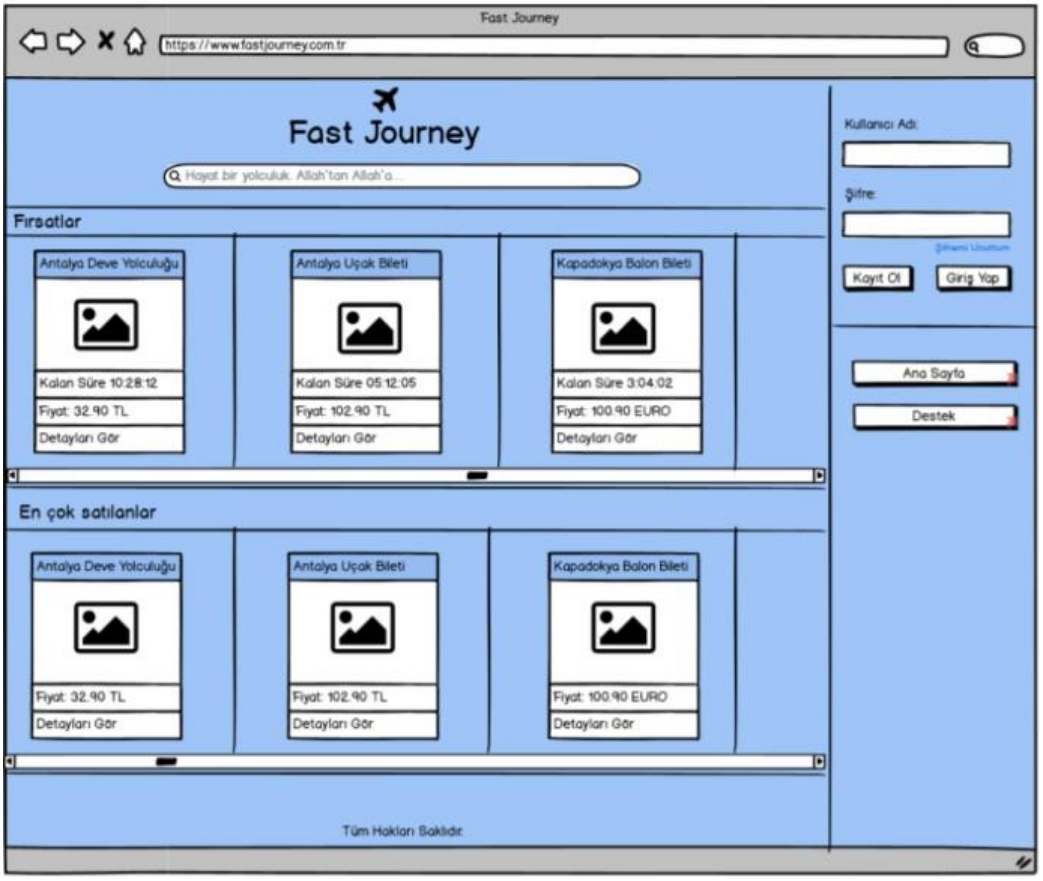
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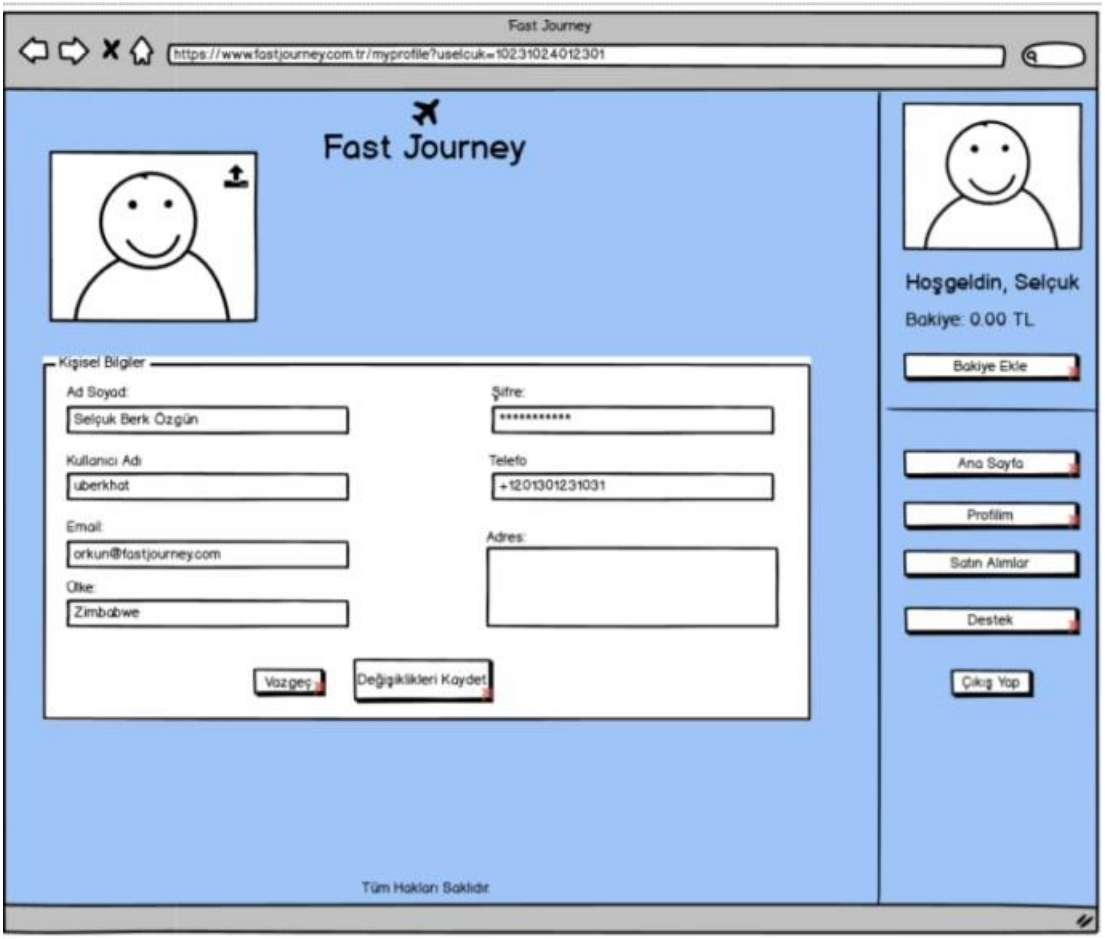
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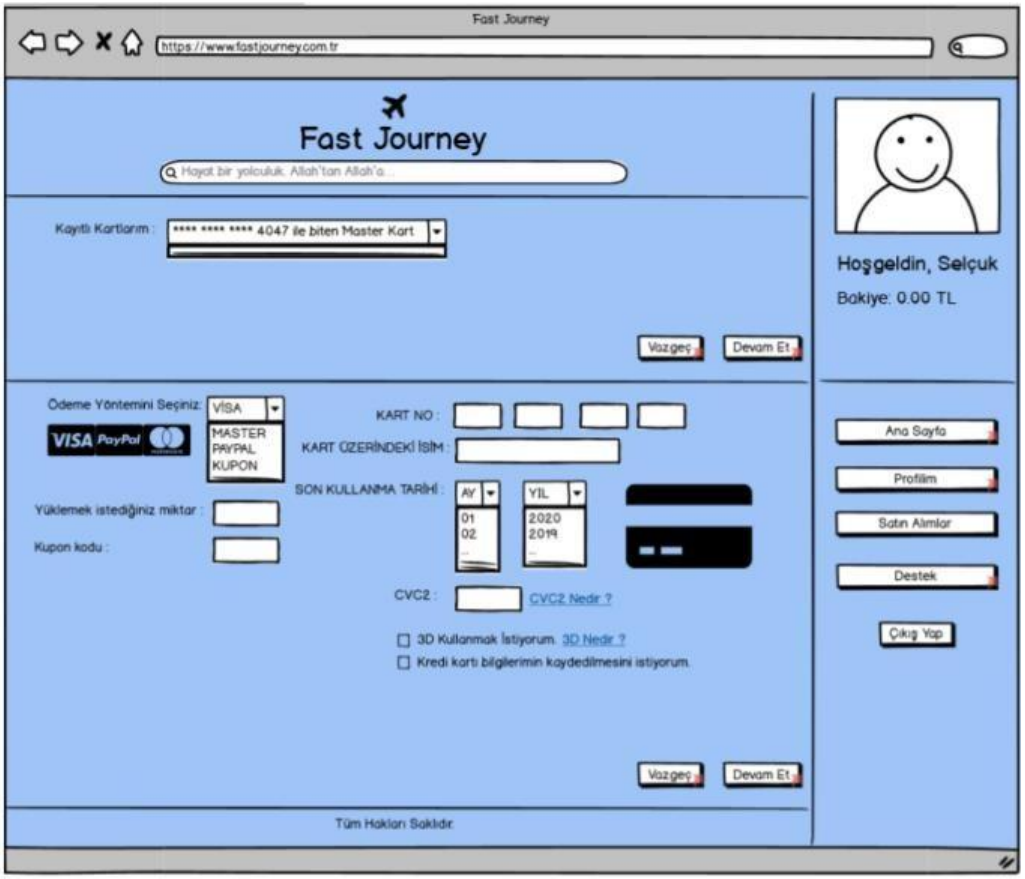
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Fast Journey
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Bu bilgiler İşyeri ile kesinlikle paylaşılmamaktadır.

13. CONCLUSION

Consequently, everything needed to know about this project is explained in detail and clealy in this document. Requirements, stakeholders, project staffing, software process model, scshedule and effort, measurements, project risks, software toolls, project needs are clarified clearly. This will be very helpful to the project manager and all the team if it is followed during development.