Software Requirements Specification

for

CV Maker

Version 1.2

Prepared by

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Revisions

Version	Primary Author(s)	Description of Version	Date Completed
1.2	Kadir Batuhan Demir	CV Maker App is on the market for the users on the Google Play Store and App store in different countries.	11/05/2020

1 Introduction

- This application will help the user prepare a presentable CV for the people who are looking for work and also the people who are looking for people to hire can use it. With this project the user can add certificates, educational informations, skills, interests easily and collects all of this under one file.
- ❖ In this file reader will find the apps purpose, the advantages, performance requirements, software requirements and security requirements, the technologies that are used on developing this project and architecture design. Back in the days people were try to prepare a CV by themselves but now with this app both the employer and the employee can use the pool that is created by the users to find qualified people for the job.

1.1 Project Purpose and Scope, and Objectives

- Today's business world is very competitive and full of opponents for us. If we are an avaricious person in this world, we must know the first rule:
 - How do we serve ourselves? It is more important than being ourselves when we are on baby steps.
- ❖ This is one of the main purposes of the application we made. Helping the user for present his / her talents, educations, skills; all the qualifications and requirements for the job. It will be in a simple and effective way for to be noticed. If your resume is not prepared carefully, your important skills may be invisible in a crowd of sentences and the employer may not be able to reach the key questions which they want. Become one of the neglected resumes; it is the biggest danger but don't worry; we developed our application with the awareness of this.
- ❖ You can download the prepared CV as a PDF or also we send it to your e-mail address. With this resume, you can visit the workplaces individually, but you can lose a lot of time. We can help you if you want to save your time too. You can send it to our contracted workplaces in a few clicks. Thanks to us, your new job interview is just a few clicks away.

1.2 Roles and responsibilities

Barış Baranaslan: 1.0 - 3.1 - 3.2 - 3.3 - 7

He done the research part of requirements very well. He helped translate and order in every articles.

Cem Solak: 2.2.3 - 4.1 - 4.2 - 4.3 - 5.3

He is Mr. Visual Paradigm. He has the programme that's why he made all schemes. Also, he made Interface sample part with his photoshop skills.

Erencan Oymak: 2.2.3 - 5.2.1 - 5.2.2 - 5.3 - 6.4

 \triangleright Ulas Yılmaz: 1.3 - 4.0 - 5.1.1 - 5.1.2 - 6.1

They were heavily helpful in legal sections, codes and explaining some definitions. They are very useful because they are experienced in business.

➤ Kadir Batuhan Demir: 1.1 – 1.4 – 2.1 – 2.2.1 – 6.3

Understanding and managing the project, work-sharing.

We have different parts in project. Different members made the main of his own parts. But all of us get together; confirmed and made some addictions and extractions in every parts. Every student has a share in every section.

1.3 Technical Assumptions and Constraints

- The app is supported by 3 platform. These are Android, IOS, UWP.
- The application is coded by C# and Java Swift.
- The reasons for the choice of java to code the android platform are among the languages for the objectoriented programming java provides the most stable environment also java is supported by every platform and has a wide library.
- ❖ In the Restful API area .Net Core is preferred because it is a cross platform, has a stable environment and compatible with the CLI besides from these it offers a vast maintenance network.
- The compilers that the app was developed are NetBeans Visual Studio, Android Studio and XCode.
- For the version check system GitHub was preferred.
- The extra tools that was used are entity framework and Mssql management studio.
- As for the web server MS ISS preferred for the reason it is highly compatible with the .Net Core technology.
- ❖ To minimize the delay that the users will experience while the process CDN technology is used.
- ❖ For the test strategy unit testing, as for the structure N-tier architecture is used.

1.4 Naming Conventions

- In project PascalCase and camelCase naming conventions used exclusively. In naming of methods and classes, PascalCase is preferred.
- On the other hand, in naming of class variables, local variables, static method usages, camelCase usage is preferred. It promotes consistency within our development team. Because of the both JAVA and C# programming languages are used in Project, it is imperative to find a naming convention method suitable for both languages.
- Recall: Microsoft guidelines recommend use of only PascalCase and camelCase. Moreover, in official documents prepared by Sun Microsystems, as can be easily seen camelCase naming convention system has priority.
- Any missed usage that is not fit with camelCase or PascalCase, will be fixed in Refactoring process.

2 Requirements

2.1 Functional Requirements

Add skills: (Skill name, written by user)

1-) User choose the lang	juage.			
Choose a language plea	se: (English) (Turkish) (German)			
2-) User enters with phore	ne number and secu	rity code which send		
GSM NUMBER:(0)			
CODE: (# # #	##) (Should	be entered in 45 sec	onds)	
3-) System asks e-mail a User can continue after o	address and check it open that e-mail.	is it real or fake. Afte	er it is real, send a confirm	mail.
		[√] [X] (e-ma	ail check in 3 seconds)	
4-) The application prese (Name-surname, city, phupload)			s; diploma and education o	certificates for
Name-Surname:				
Phone Number again:	(0)			
Choose City (Where you	ı live): (Istanbul) (Berlin) (Ankara) •	Choose District (W	/here you live): (Avcılar) (Tempelho (Çankaya) •	
City and district names a	are listed with letter o	order. User selects.		
Add Certificate: [+] [+ Add Diploma: [+] [+]] [+] [+] [+] [+] [+] [+] buttons (open an upload scree	en for pdf and picture files	
Choose language: (Engl (Turk (Germ	ish)			
:	*	* * * * * : rating sta	ars for skills and language	•

5-) Final part; user choose one of the themes for resume (User done all of them with user interface)
6-)
6.1 Now the CV is ready. The user can save it as a pdf, or we can send it to users e-mail. Then user can use it as requested
6.2 Also we can send it workplaces which contracted with us. You can do it with small clicks on the screen. Companies feedback (positive or negative) will send your e-mail address too. (You must add 5 photos for our applies)
Send e-mail [✓] Save as pdf [✓] Send contracted workplaces [✓] Add photos: + + + + +
7-) [Continue] button for last security test
8-) CAPTCHA test
9-) After successful CAPTCHA test, resume send your e-mail, save as pdf to your phone and send contracted places; which one or ones do you choose.
10-) [Exit] button for main menu (Gsm number - Code screen)

2.2 Non-Functional Requirements

2.2.1 Performance Requirements

- ❖ E-mail check in 3 seconds.
- ❖ User can download 5 certificates in the same time.
- User can download 5 pics in the same time.
- Maximum and minimum letter limits for introduction part.
- City, district, language options must be in letter order.
- First GSM code should reach the user in 10 seconds. (Will be agreed with a suitable OTP SMS company.)
- Notifications must be in 3 seconds.
- ❖ If internet connection is gone, application must be stop and warn the user.
- ❖ Max limit must be 600ms for all service response time.

2.2.2 Safety and Security Requirements

- Gsm number and security code for login: There is no registration; so, we earn time and do the entrance more secure.
- Mail control and confirm mail for continue.
- ❖ If there is another user's account online in the same time, system warns the user.
- ❖ With "Hashing system" users informations are protected by irreversible encryption.
- Using HTTPS instead of HTTP as data transfer protocol.
- CAPTCHA.

2.2.3 Software Quality Attributes

- Reliability: Login is done via personal handphone. Checking the e-mail address is it real? (the confirmation mail will come if it is true and continue the application)
 Final part; user agreement, and captcha test. Also, we use irreversible encryption. These functions are proof of reliability for our CV Maker App.
- ❖ Portable: The application will be accessible from anywhere in the world from the stores we have agreed with.
- Sustainable: Depending on the demands of the customer and the development of the technology. New updates can always be added and removed with regular maintenance. It allows creating new CVs on long years.
- ❖ Adaptable: Application is compatible with IOS and Android systems. Also, we have language support for all of the world. If the users will have high pleasures and there is a high demand, we can make it a website or develop company-specific versions too.
- ❖ Testability: Tested periodically with our test application, before and after application is installed an accessible in stores. If there is an error while the user using the application, it creates an error report and send us. So, we can fix the problem easily. (Like Google Firebase Analytics Error Report)

3 Other Requirements

3.1 Legal Requirements

The application development faces the same problems as all the other business areas. These are:

- An app that launched in the international market have to obey the laws of the countries the app is available. Before the lunch, a lawyer should check to find if the app is against any law and make adjustments for those countries.
- ❖ Your companies business model is another important legal problem. An **LLC** is considered a right structure to limit your liability and you and your partners if any problems arise.
- ❖ NDA, a non-disclosure agreement is a critical part at the beginning of the business idea. This protects your idea from any danger it will faces during the first discussion the app idea with the potential investors or the persons of interests.
 - For an original idea that has not have any similars in the international market patent is vital. Patent is used to protect specific app mechanism that will make your idea work.
 - ❖ DMCA. While you're obliged by app stores to maintain "moral ground" inside your app, there is Digital Millennium Copyright Act (known as the Online Copyright Infringement Liability Limitation Act) that exempts from direct and indirect liability of Internet service providers. This means that any missuses of the app is not your fault and you cannot hold responsible for any damage or crime it involves.
 - International Age Rating Coalition. IARC is aimed to streamline the acquisition of content ratings from authorities of different countries, by referring to IARC rules you will comply with requirements of most significant kids protection authorities.

3.2 Internationalization Requirements for Apps:

Internationalization for app means taking into account the different punctuation conventions, formatting of numbers, dates, and ways of interpreting the text in different languages for the app. This is accomplished by:

- Using a translation software solution that enables you to translate to every language that is needed without performing extensive coding.
- Transforming the content of the app like the text, screen layouts, images and even app behavior as it need for the local users prefer.
- ❖ For the current state of the world most of the countries people spoke more then one language so if the user prefers another language, they should be able to access it

3.3 Database Requirements

- Supporting common software languages during any processing is incredibly necessary.
- The entire project can shut down unless the software supports the other languages it means supporting more then one type of data, holding different type of graphs templates and key values at the same time.
- Easily accessible so that there won't be any delay.
- Widespread Programming Language Support
- Multi-Model Persistence
- Data Access and Analysis Easily

4 Architecture and Architectural Design

Mainly, there are three subsystems of the Project. Which are Restful API Service, Android Application and IOS Application. Rapid Application Development (RAD) is preferred to complete the project quick with lower costs. For apply this approach, every team member has a solid and fully knowledge of user requirements and project plan.

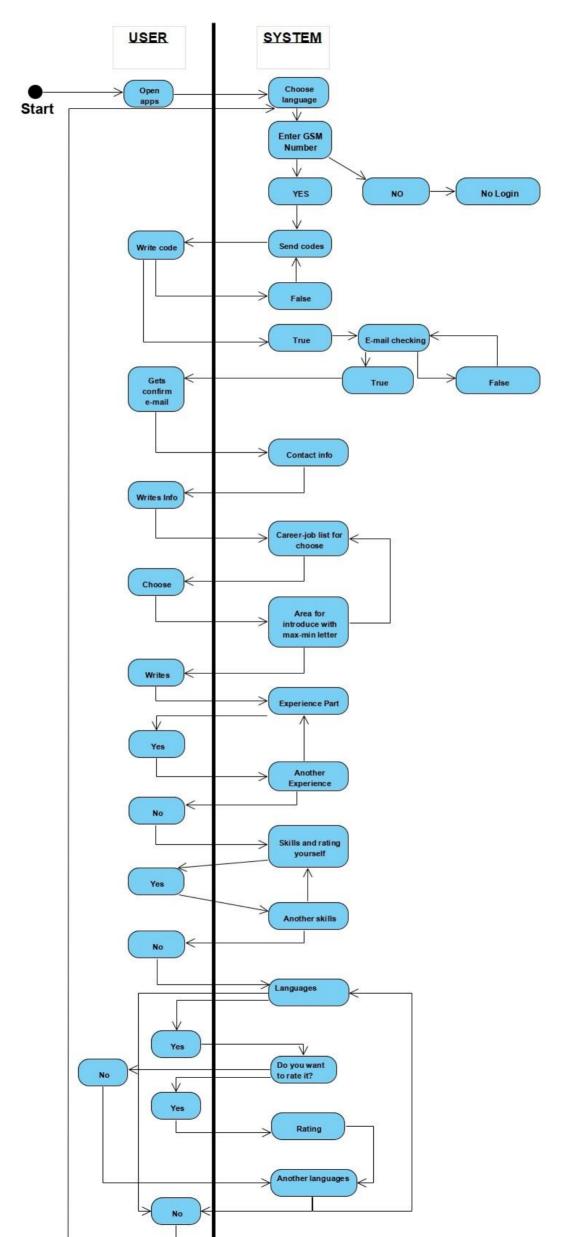
N-tier architecture is used in project. There are four layers to build:

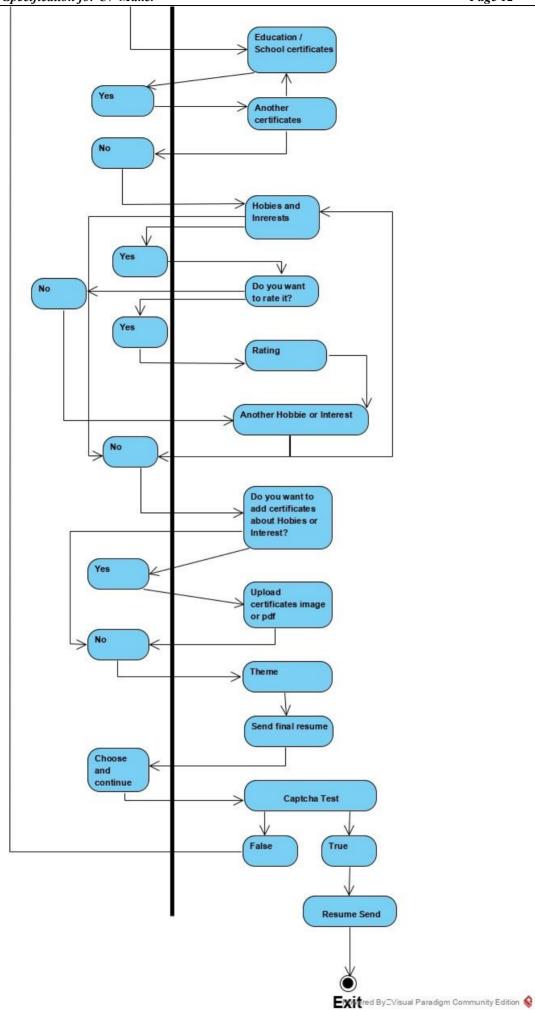
- ❖ Data Access Layer: The only layer that has database access. All CRUD operations performed on Data Access Layer. It also contains the SQL connection instances and usage of Entity Framework Data manipulation methods. Can be only seen on BL (Business Layer)
- ❖ Business Layer: Carries specialized methods for workpieces. Business Layer has access to Data Access Layer. With the usage of DAL methods for CRUD operations, the specialized methods implemented to project depends on the project entities and needs. Can be only seen on PL (Presentation Layer)
- Presentation Layer: HTTPGET and HTTPOST methods are contained in Presentation Layer. Can be accessed from Client services. Client request handshakes with Restful API in this layer. It determines how the request is processed and which type of data will be the response. It also determines the response code status and contents. Presentation Layer has access to Business Layer to perform operations.
- Entity Layer: All the application models, classes, interfaces, database entities, response models, Authentication models etc. stored in this layer. Entity layer can be accessed on DAL, BL and PL. However, Entity Layer has no access any other layer on project.

Client - Server connection (JSON)

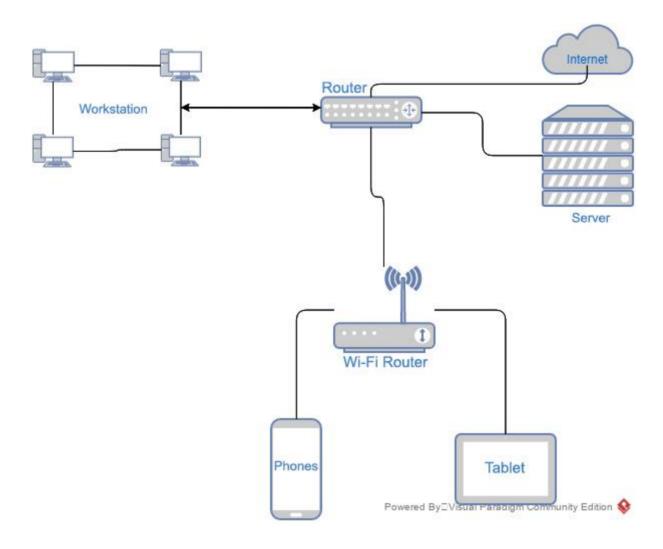
In RestfulAPI, after the response prepared, the application classes are converted to JSON format. .NET WEB API classes automatically provides JSON serialization on server side. On client services, api response is converted to application models again. (deserialization)

4.1 Logical View



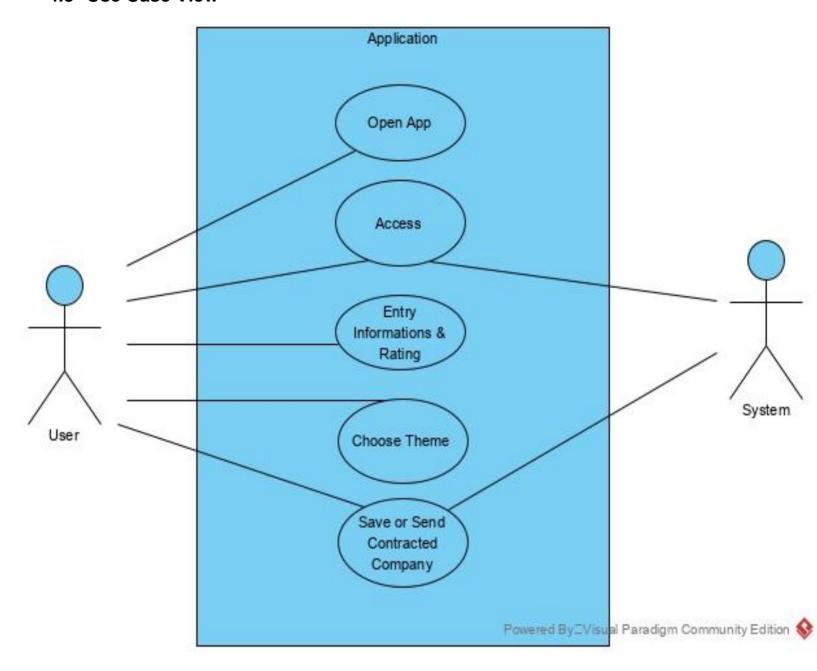


4.2 Deployment View



- Our datas stored in server. Via router datas transport to workstation. In here data processing and transport to server.
- ❖ The router connected with the internet. So the system direct to the Wi-Fi router and the Wi-Fi router shares datas with mobile devices.

4.3 Use Case View



4.3.1 Use Case Scenario

Use case name:	Create a CV file		
Scenario:	Designing a remarkable and organized CV		
Triggering event:	User entering the required information into the system		
Brief description:	She/He wants to prepare his own CV in a remarkable way among job applicants with these issues: Contact information, education information, job title Past job positions and experiences Capabilities and certificates Hobbies etc.		
Actors:	Users		
Related use cases:	When asked to prepare a CV via n	nobile devices.	
Stakeholders:	Users System Contracted Companies		
Preconditions:	User's own e-mail and phone number	ber.	
Postconditions:	The user should enter the required information in detail and complet the process.		
Flow of activities:	Actor	System	
	 Choose language User enters their gsm number User enters their mail Contact information is entered by the user Job history and positions are entered by the user Capabilities and certificates are entered by the user Language information is entered by the user Rating Hobbies are entered by the user Rating Certificates are added by the user as pictures and pdf Theme selection and preview are selected by the user 	1.1. System shapes the app for the selected language 3.1. System creates a user in the database and attaches the contact information to the user 4.1. System saves the names of the former jobs and positions into a list 5.1. System checks the entered certificates with the certificates in the database and adds them in to the users file 6.1.1. System adjusts the degree of the skill the user has been added 7.1.1. System adjusts the degree of the skill the user has been added 8.1. System adds the pdf and jpg files to the user for the conformation 9.1. System prints the preview the selected theme for the user to download	
Exception Conditions:	 If the user writes wrong phone number, code sent to wrong number too. After 2 minutes system wants new number If the user writes an invalid mail address, system doesn't do anything until user write an available mail address. Mail address can be valid but if it is user's mail, confirm mail will send another person. After that; system turn back enter the mail section. 		

5 Design and Implementation

5.1.1-)

```
public override async Task GrantResourceOwnerCredentials(OAuthGrantResourceOwnerCredentialsContext context)
   using (DatabaseContext DbContext = new DatabaseContext())
       var user = DbContext.Users.First(x => x.Username.Equals(context.UserName, StringComparison.OrdinalIgnoreCase));
       if ( user == null )
           context.SetError("Oturum Hatası", "Kullanıcı adı ve şifre hatalıdır");
       }
       else
           var inputPass = ManageHashing.SHA256(context.Password, user.Salt);
           if (user.Password == inputPass || user.FacebookLoginPass == inputPass || user.GoogleLoginPass == inputPass || user.AppleLoginPass == inputPass)
               var identity = new ClaimsIdentity(context.Options.AuthenticationType);
               identity.AddClaim(new Claim("UserName", user.Username));
               identity.AddClaim(new Claim("Role", "User"));
               identity.AddClaim(new Claim("Password", user.Id.ToString()));
               context.Validated(identity);
           else
            {
                context.SetError("Oturum Hatası", "Kullanıcı adı ve şifre hatalıdır");
```

5.1.2-)

```
public static byte[] StringToByte(string deger)
{
    UnicodeEncoding ByteConverter = new UnicodeEncoding();
    return ByteConverter.GetBytes(deger);
}

13 basyvuru
public static string SHA256(string input,string salt)
{
    string toBeHashed;

    toBeHashed = input + salt;

    SHA256Managed crypt = new SHA256Managed();
    byte[] arySifre = StringToByte(toBeHashed);
    byte[] aryHash = crypt.ComputeHash(arySifre);
    return BitConverter.ToString(aryHash);
}

3 basyvuru
public static string CreateSalt()
{
    string str = Guid.NewGuid().ToString();
    return str;
}
```

5.2.1-)

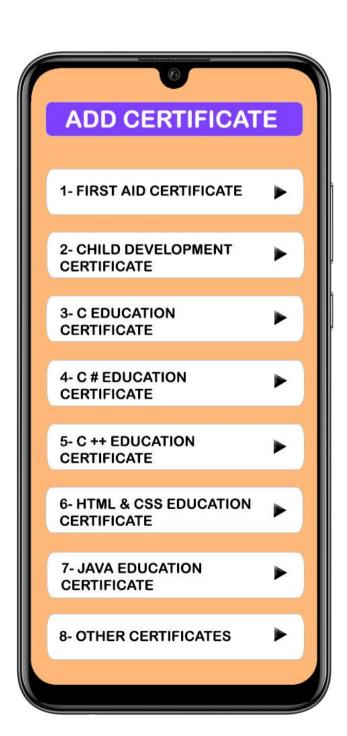
```
class addCertificate
1
    ₽{
 3
          static void ListAndAddCertificate()
 4
              String a = "ILK YARDIM SERTIFIKASI";
 5
 6
              String b = "COCUK GELİŞİM EGİTİM SERTIFIKASI";
              String c = "C EGİTİM SERTIFIKASI";
 7
              String i = "C# EGİTİM SERTIFIKASI";
 8
              String k = "C++ EGİTİM SERTIFIKASI";
 9
              String j = "HTLM & CSS EGİTİM SERTIFIKASI";
10
              String e = "JAVA EGİTİM SERTIFIKASI";
11
              String f = "DİĞER SERTİFİKALAR";
12
13
14
              System.out.println("1-) ILK YARDIM SERTIFIKASI");
15
              System.out.println("2-) COCUK GELİŞİM EĞİTİM SERTIFIKASI");
              System.out.println("3-) C EGİTİM SERTIFIKASI");
16
17
              System.out.println("4-) C# EGİTİM SERTIFIKASI");
18
              System.out.println("5-) C++ EGİTİM SERTIFIKASI");
19
              System.out.println("6-) HTLM & CSS EGİTİM SERTIFIKASI");
20
              System.out.println("7-) JAVA EGİTİM SERTIFIKASI");
              System.out.println("8-) DİGER SERTİFİKALAR");
21
22
23
              System.out.println("Select the certificate you want to add");
24
              java.util.Scanner s = new Scanner(System.in);
25
              int u = s.nextInt();
26
              if(u==1){
                  System.out.println(a+ " CV'YE EKLENDÎ");
27
28
29
              if(u==2){
                  System.out.println(b+ " CV'YE EKLENDİ");
30
31
32
              if(u==3){
33
                  System.out.println(c+ " CV'YE EKLENDÎ");
34
35
              if(u==4){
36
                  System.out.println(i+ " CV'YE EKLENDÎ");
37
38
              if(u==5){
                  System.out.println(k+ " CV'YE EKLENDÎ");
39
40
41
              if(u==6){
                  System.out.println(j+ " CV'YE EKLENDÎ");
42
43
44
              if(u==7){
                  System.out.println(e+ " CV'YE EKLENDİ");
45
46
47
              if(u<1){
48
                  System.out.println(f+ " CV'YE EKLENDÎ");
49
50
              if(u>7) {
51
                  System.out.println(f+ " CV'YE EKLENDÎ");
52
53
54
55
```

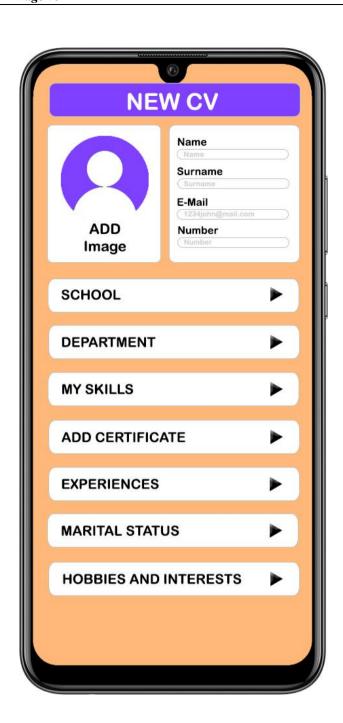
5.2.2-)

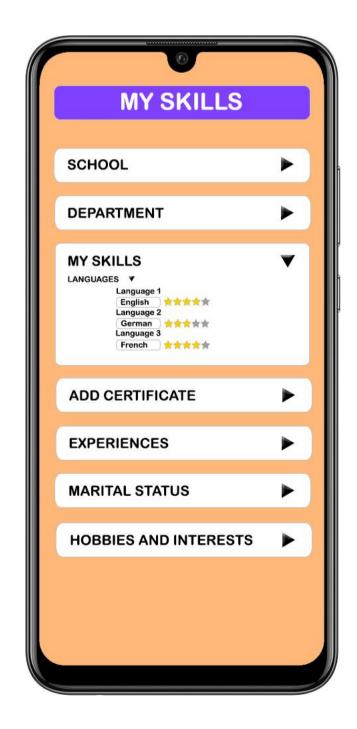
```
class job
1
2
    □{
3
4
          static void GetJob() {
5
 6
              String a = "BILGISAYAR MUHENDISLIGI";
7
              String b = "ELEKTRIK VE ELEKTRONIK MUHENDISLIGI";
              String c = "MAKINE MUHENDISLIGI";
8
9
              String i = "OGRETMENLIK ";
              String k = "HUKUK";
10
              String j = "SAGLIK BILIMLERI";
11
              String e = "HALKLA ILISKILER";
12
13
              System.out.println("1-) BILGISAYAR MUHENDISLIGI");
14
15
              System.out.println("2-) ELEKTRIK VE ELEKTRONIK MUHENDISLIGI");
              System.out.println("3-) MAKINE MUHENDISLIGI");
16
              System.out.println("4-) OGRETMENLIK ");
17
18
              System.out.println("5-) HUKUK");
              System.out.println("6-) SAGLIK BILIMLERI");
19
              System.out.println("7-) HALKLA ILISKILER");
20
21
22
              System.out.println("Please enter your job/depertmant");
23
              java.util.Scanner s = new Scanner(System.in);
24
              int o = s.nextInt();
25
              switch(o){
26
                  case 1:
27
                      System.out.println(a+" CV'NİZE EKLENDİ");
28
                      break;
29
                  case 2:
                      System.out.println(b+" CV'NİZE EKLENDİ");
30
31
                      break;
32
                  case 3:
                      System.out.println(c+" CV'NİZE EKLENDİ");
33
34
                      break;
35
                  case 4:
                      System.out.println(i+" CV'NÎZE EKLENDÎ");
36
37
                      break;
38
                  case 5:
                      System.out.println(k+" CV'NİZE EKLENDİ");
39
40
                      break;
41
                  case 6:
42
                      System.out.println(j+" CV'NİZE EKLENDİ");
43
                      break;
44
                  case 7:
                      System.out.println(e+" CV'NİZE EKLENDİ");
45
46
                      break;
47
                  default:
                       System.out.println("DIGER BÖLUM CV'NİZE EKLENDİ");
48
49
50
51
52
```

5.3-) Interface Examples









6 Other Supporting Information

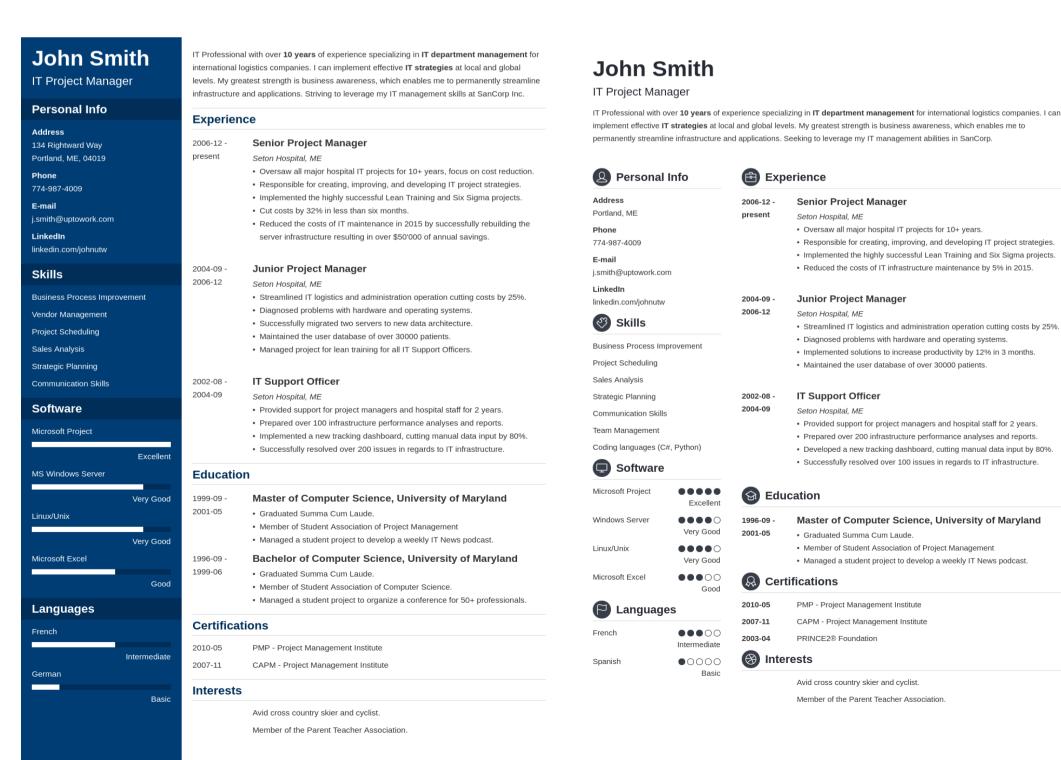
6.1-) Cost Analysis:

There are many outsource requirements related with project.

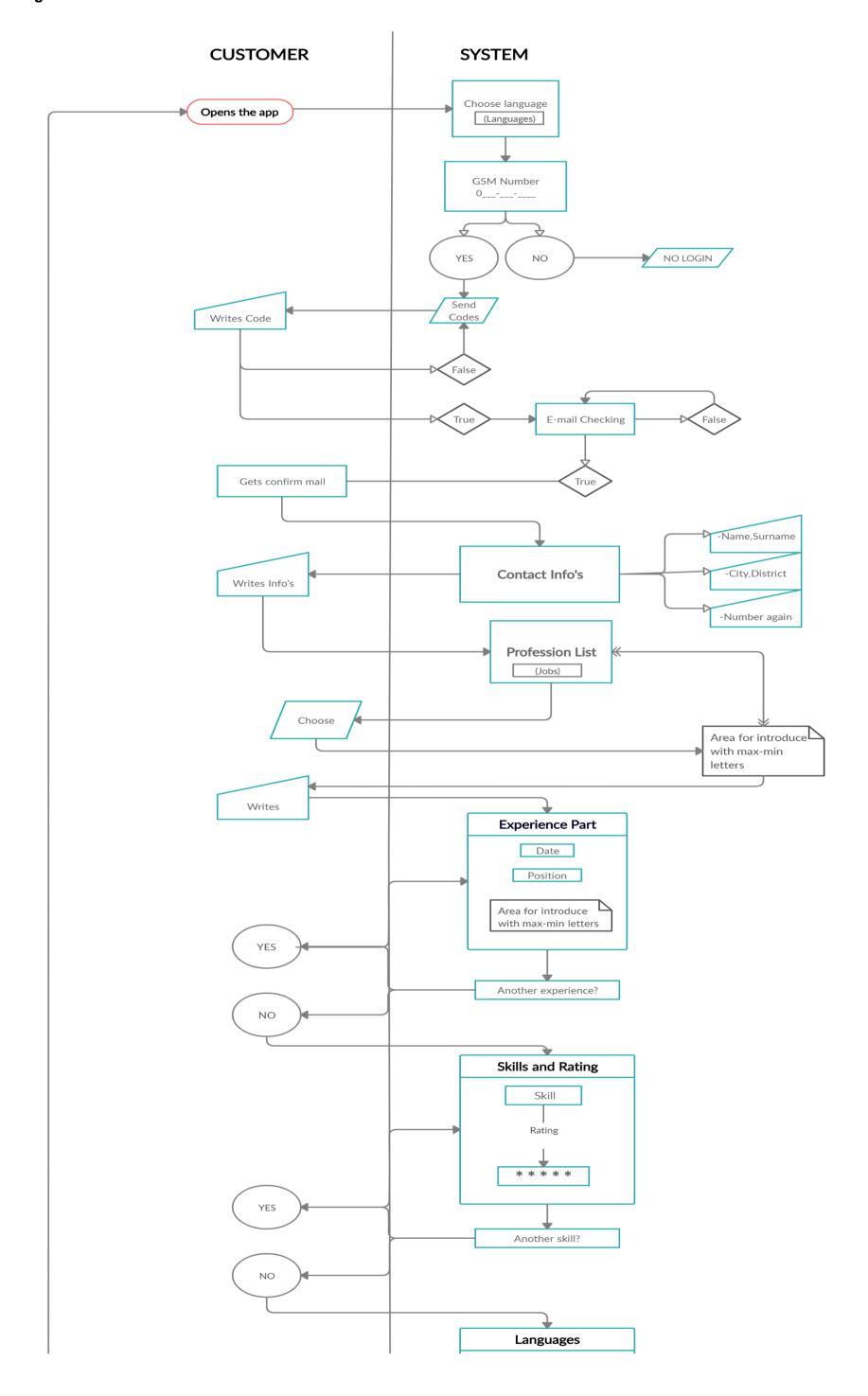
TASKS	Outsource Firm	Unit Price	Annual Cost
Database and Server	Godaddy Inc.	14.500,00\$	14.500,00 \$
OTP SMS Provider	NetGSM	0,003 \$	1.200,00 \$
Corporate E-mail Account	Godaddy Inc.	3\$	36,00 \$
Domains and Subdomains	domain.com	9\$	18,00 \$
SSL Sertificate	GeoTrust	40 \$	40,00 \$
Google Play Store Developer Acc.	Google Inc.	25 \$	25,00 \$
Apple Developer Program			
Enrollment	Apple Inc.	99 \$	99,00 \$
Azure Notification Hub Enrollment	Microsoft Inc.	12,80 \$	128,00 \$
Creating an appropriate privacy			
policy	privacypolicies.com	25,00 \$	25,00 \$
TOTAL			16.071,00 \$

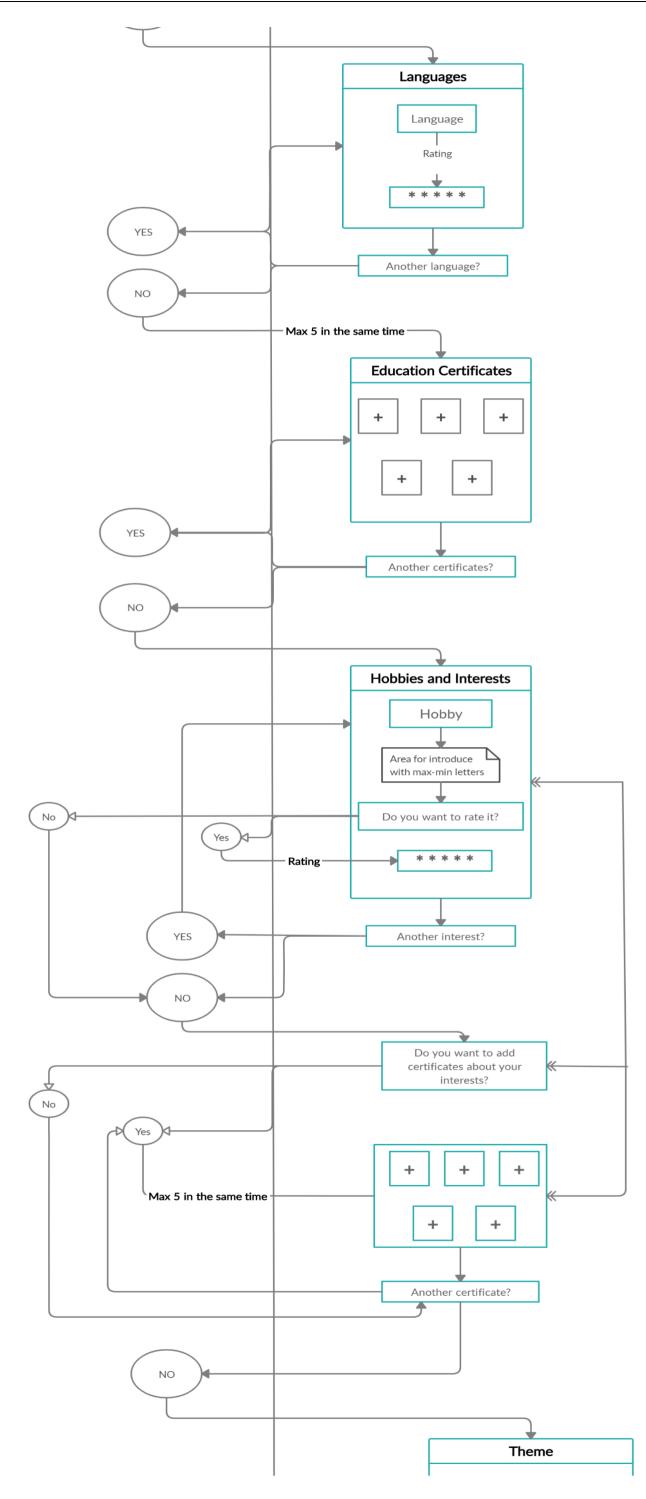
- ❖ Database and Server: Simply, this is the project hosting expense. GoDaddy is selected for hosting providers because of their strong customer support and %99.9 of time accessible rate.
- OTP SMS Provider: NetGSM is selected for outsource SMS provider because of the low costs and accessible access times. Moreover, SMS packages can be extended or updated.
- ❖ Corporate Email Account: In order to give a corporate and decent image to customer, corporate mail addresses have a huge importance. With corporate email account, automatic and dynamic emails can be sent. Because of their Team Email plan, GoDaddy is selected for email service.
- SSL Certificate: Today, data security is a very important topic. For maximizing the security, using SSL certificate is a must. GeoTrust Quick SSL certificate is one of the most secure services.

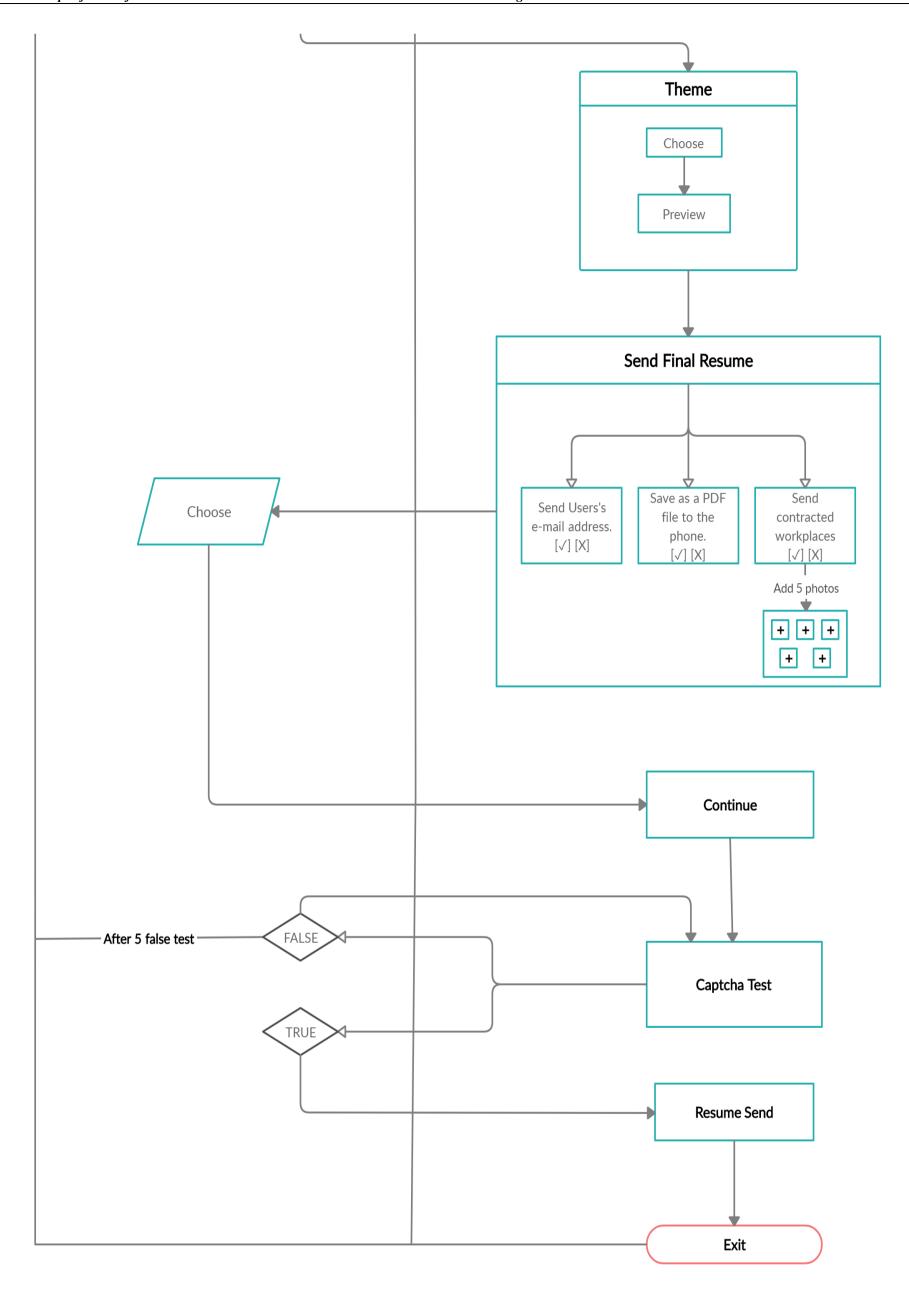
6.2-) Samples from Another Resume Builders:



6.3-) Supporting Informations for Readers:







6.4-) CV Maker solves problems:

- CV Maker acts like a guide for inexperienced and for new graduates. Who have not prepared a CV before, can prepare his\her own CV in the most accurate way.
- ❖ By integrating your own recruitment ads with the program only from this application they can accept CVs. Thus, the CVs sent will be in the order that the employer wants.

7 References

- ❖ www.zety.com
- ❖ www.resumegenius.com
- www.resumeviking.com
- www.medium.com
- www.gbksoft.com
- en.wikipedia.org
- * www.digitalocean.com
- www.martechadvisor.com
- www.oracle.com
- tr.godaddy.com
- www.netgsm.com.tr
- www.geotrust.com
- www.privacypolicies.com
- app.creately.com
- www.cats.iku.edu.tr
 - In this project, we use our own sentences mostly. But sometimes we needed help on the Internet like every people. For technic details, official terms, explains, samples and some translates.
 - For 1st and 2nd sections we didn't need Internet searching. While we were in 3rd part, we did serious research. (Legal, Internationalization and Database requirements)
 - ❖ While we were writing architecture, we got help from Internet because there were lot of terms we must to use.
 - Teacher's PDF files on the Cats IKU system are very useful for understand schemes and diagrams. We opened some of PDF's for our projects solution.
 - In the code section, our friends used their own knowledge.
 - ❖ We used GoDaddy infos for cost analyze section and we gave some resume builder samples, online CV samples. These samples inspired us, and we organized our application.
 - ❖ We found "appcreately.com" accidently. All of members don't have Visual Paradigm. While we were searching online Visual Paradigm or a likely programme- web site; we found it. It is very quality and useful. But it is getting slower if your scheme gets bigger.