

# FINAL REPORT OF TERM PROJECT

## **CMSE 201**

# **Fundamentals of Software Engineering**

#### **Team members**

SEYİT AHMET İNCİ - NO: 19331143
ABRAHAM HENRY ATOGWE - NO: 19701310
SİNEM İMGE TURGUT - NO: 19001316
KHAWLAH AL-SHUBATI - NO: 19701557

GROUP NO: 8

PROJECT NAME : RatingWeb

PROJECT START DATE: 9th March 2021

PROJECT END DATE : 14st June 2021

#### **ABSTRACT**

As technology is improving in many sectors, many websites are appearing in which the user cannot define which website to trust, or which website is better, or which website serves the user in the best applicable way. Accordingly, we thought of a system that can help the user decides which website to use easily. In RatingWeb, the websites will be evaluated based on factors such as genuineness of the website, time delivery of products after online transactions and support provided by the website. All of this will be done using an opinion mining algorithm which will be responsible for rating the website according to different user's opinions that are stated in the comments section.

Keywords:
Rate websites.
Genuineness.
Transaction websites.
Trustworthy websites.
Users' opinion.

# **Table of Contents**

ABSTRACT
Table of Contents
LIST OF FIGURES
LIST OF TABLES
1. INTRODUCTION
2. PROJECT PLANNING AND MANAGEMENT
3. REQUIREMENTS ANALYSIS
4. DESIGN
4.1 High level design (architectural)
4.2 Software design
5. USER GUIDE OF THE SYSTEM
6. DISCUSSION
7. CONCLUSION
8 REFERENCES

## LIST OF FIGURES

Figure 1. Organization Scheme

Figure 2. Gantt Chart Scheme

Figure 3. WBS

Figure 4 Network Diagram

Figure 5 Architecturel Diagram

Figure 6 Class Diagram

Figure 7 Use Case Diagram

Figure 8 Sequence Diagram

Figure 9 BPMN Diagram

Figure 10 DFD LEVEL O

Figure 11 DFD LEVEL 1

Figure 12 ER Diagram

Figure 13 Activity Diagram

Figure 14 Home screen

Figure 15 Login Screen

Figure 16 Admin Screen

Figure 17 User's Screen

Figure 18 Help Screen

Figure 19 Send Feedback Screen

Figure 20 Add website Screen

Figure 21 View feedback Screen

Figure 22 Change Password Screen

- Figure 23 Comment on website Screen
- Figure 24 View user's information Screen

Figure 25 View comments Screen

## LIST OF TABLES

- Table 1. Project Team
- Table 2. Work Package 1
- Table 3. Work Package 2
- Table 4. Work Package 3
- Table 5. Work Package 4
- Table 6. List of Milestones
- Table 7. List of Risks
- Table 8. Project Economic Expectations
- Table 9. Instrument/Equipment/Software Purchases
- Table 10. Quarterly Estimated Cost Form
- Table 11 Measurement Parameter
- Table 12. UFP/UF/DI Calculations
- Table 13. Critical Path Management
- Table 14 Probability calcullations
- Table 15 Use Case Table

#### 1. INTRODUCTION

RatingWeb is an advanced Website Evaluation system that rates the website based on the opinion of the user. Website will be evaluated based on factors such genuineness of the website, timely delivery of the product after online transaction and support provided by the website. User will comment about the website, based on the comment system will rate the website. The system takes opinion of various users, based on the opinion; system will decide whether the website is genuine or not. The system uses opinion mining methodology in order to achieve desired functionality. We use a database of sentiment-based keywords along with positivity or negativity weight in database and then based on these sentiment keywords mined in user comment is ranked. The system contains keywords related to fraud, genuineness, timely delivery of the product and service meters in the database. Based on these factors system will rate the website.

## 2. PROJECT PLANNING AND MANAGEMENT

## 2.1. Project Team

Table 1. Project Team

Project No	8
Project Name	Website Evaluation Using Opinion Mining
Start Date	9 <sup>th</sup> March 2021
End Date	14 <sup>st</sup> June 2021
Time	14 weeks

Team leader / Programmer				
Name Surname	Seyit Ahmet Inci ID No 19331143			
Title/Role	Team leader and programmer			
Address	Famagusta/ TRNC			
Phone	+905488610166			
Email	<u>19331143@emu.edu.tr</u>			

Web applications / System developer				
Name Surname	Sinem İmge Turgut	Sinem İmge Turgut ID No 19001316		
Title/Role	Web application and system de	Web application and system developer		
Address	Famagusta/ TRNC			
Phone	+905528161704			
Email	<u>19001316@emu.edu.tr</u>			

Project's tester			
Name Surname	Abraham Henry Atogwe	ID No	19701310
Title/Role	Project's tester.		
Adress	Famagusta/ TRNC		
Phone	+2348135540199		
Email	Loveatogwe@gmail.com		

Database / User Interface designer				
Name Surname	Khawlah Al-shubabti ID No 19701557			
Title/Role	Database and user interface De	esigner.		
Adress	Famagusta/ TRNC			
Phone	+905338341999			
Email	19701557@emu.edu.tr			

# 2.2. Organization Scheme

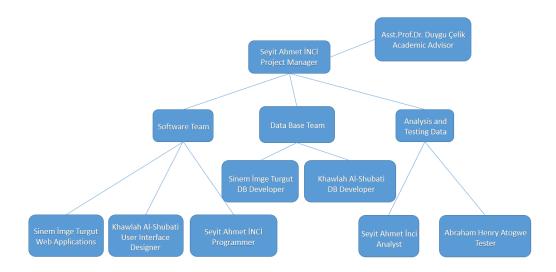


Figure 1. Organization Scheme

#### **Project Definition**

RatingWeb is an advanced website evaluation system that rates different websites based on the users' opinion.

## Aim of the Project

The aim of the WebRating System is to help users identify the genuineness of the websites they are using and to know which website is better by the opinion of other users.

#### Scope of the project

The scope is an advanced Website Evaluation system that rates the website based on the opinion of the user. Website will be evaluated based on factors such genuineness of the website, timely delivery of the product after online transaction and support provided by the website. User will comment about the website, based on the comment system will rate the website. The system takes opinion of various users, based on the opinion; system will decide whether the website is genuine or not. The system uses opinion mining methodology in order to achieve desired functionality

#### Target Users/Innovative Aspects/Contributions of Project

The customers wanting to buy the product would like to compare the products and the services provided by different websites before purchasing the product. The services and all the parameters related to the website can't be compared on the existing system. Therefore; it makes it difficult for the customers to decide. Although the websites would be rated but comparing the websites would make it more efficient and can provide clear options for better products.

#### 2.3. Tools/Methods Applied

The WebRating system will be designed using many tools such as Visual Paradigm, Microsoft Visio, and Visual Studio for coding. Furthermore, Microsoft Project tool is used to manage and schedule the

#### 2.4. Reason for starting the Project

Considering all the information available on the web every individual should desire to find and access useful information. For example, users want to learn about different shopping web sites and what products and services they offer using the web. By the help of this information users may learn about the websites and in turn choose a website which is suitable according to their standards.

#### 2.5 Required resources:

- [1]. IEEE Recommended Practice for Software Requirements Specifications. (1998). Ieeexplore.ieee.org. Retrieved 27 May 2017, from http://ieeexplore.ieee.org/document/720574/
- [2]. IEEE Recommended Practice for Software Design Descriptions. (1998). Ieeexplore.ieee.org. Retrieved 27 May 2017, from <a href="http://ieeexplore.ieee.org/document/741934/">http://ieeexplore.ieee.org/document/741934/</a>
- [3]. Project Management Software | Microsoft Project. (2016). Products.office.com. Retrieved 27 May 2017, from https://products.office.com/en-us/project/project-andportfolio-management-software?tab=tabs-1
- [4]. Software Design Tools for Agile Teams, with UML, BPMN and More. Visualparadigm.com. Retrieved 27 May 2017, from https://www.visual-paradigm.com/
- [5]. Flowchart Maker & Diagramming Software, Microsoft Visio. (2016). Pr oducts.office.com. Retrieved 27 May 2017, from https://products.office.com/enus/visio/flowchart-software?tab=tabs-1
- [6]. MockFlow Online Wireframe and UX Tools. Mockflow.com. Retrieved 27 May 2017, from <a href="https://www.mockflow.com">https://www.mockflow.com</a>
- [7] Website rating using opinion mining:

https://nevonprojects.com/website-evaluation-using-opinion-mining/

# 2.7 List of Work Packages

Table 2. Work Package 1

Work Package No	1
Work Package Name	Project Feasibility and Pre-Research (Feasibility
	Analysis)
Start-End Date and	9th March to 25th March 2021
Time	
Related Organizations	

# 1- List the activities of work packages.

# 1.1 Project Process and Economic Feasibility:

- 1- project initiation
- 2- Identification of the requirements and cost analysis of relevant sectors
- 3- Workflow Analysis.
- 4- Analysis of related products

# 1.2 Technological Feasibility:

- 1- Output technical and technological requirements analysis.
- 2- Determining the Technological resources.
- 3- Examination of similar national and international projects.
- 4- Conceptual design
- 5- Software requirements analysis.

2- Describe the methods and parameters that will be used for work package.
• •
Internet research.
Internet research.
3- List the experiments, tests and analysis in the work package.
Economic market and outcomes test.
Technological requirements and users' needs test.
Project process flow test.
4- List the output of work package and its success criterias.
Outputs:
Complete guides found from the research in addition to economic and technological feasibility
study.
Success Criteria's:
By this project is ready to start working on since it will be approved and the initial requirements
by this project is ready to start working on since it will be approved and the initial requirements
are well documented.
5- Explain the relation of output with other work packages
This is considered the first stage of developing the project. It holds the basics and main documents
needed to start designing the data of the project.

Table 3. Work Package 2

Work Package No	2
Work Package Name	Based System Design Technology (Analysis & Design stage)
<b>Start-End Date and Time</b>	26 <sup>th</sup> March to 9 <sup>th</sup> April 2021
Related Organizations	

1- Lis	t the	activities	of	work	packages.
--------	-------	------------	----	------	-----------

- Determining the language to be used
- Design of systems
- Material and supplier selection
- Evaluation of System and revision

# 2- Describe the methods and parameters that will be used for work package.

- Visual Studio
- Customer feedback

# 3- List the experiments, tests and analysis in the work package.

- General Design specification
- Review preliminary software specifications
- Develop functional specifications
- Design of system
- Develop prototype based on functional specifications
- Incorporate feedback into functional specifications
- Obtain approval to proceed
- Time analysis and budget analysis
- Effort estimation and cost of estimation
- Managing Risks

## 4- List the output of work package and its success criterias.

#### **Outputs:**

- Prototype of the project
- Dataflow diagrams
- The plan of the project

#### **Success Criteria's:**

By doing all previous steps we will be ready to start developing the system in addition to completing the design of the system.

## 5- Explain the relation of output with other work packages

Putting the right effort on this stage will make the work easier for us in the coming stages. Furthermore, Analyzing will strongly help in understanding the project criteria and thus made the project stand out.

#### Table 4. Work Package 3

Work Package No	3
Work Package Name	Development of System Software (Development
	Stage)
Start-End Date and	10 <sup>th</sup> April to 8 <sup>th</sup> June 2021
Time	
Related Organizations	

## 1- List the activities of work packages.

- Creating the database
- Coding and debugging
- Algorithm modeling
- User interface and system testing

## 2- Describe the methods and parameters that will be used for work package.

- Visual studio for coding
- UI design
- Database implementation

## 3- List the experiments, tests and analysis in the work package.

- Using professional tools for coding and programming
- Assign development staff
- Database Analysis
- Algorithmic Analysis

## 4- List the output of work package and its success criterias.

### **Outputs:**

- Database and the desired codes are ready
- Developed user interface
- Connection with all other websites

#### **Success Criteria's:**

- Dataflow correctness
- Effective database design
- The Database must hold a large amount of information.

# 5- Explain the relation of output with other work packages

In this stage the program for the WebRating system well be ready in addition to the database.

By improving the user interface and building the right database that will help connecting users to all other websites that they are using, now the program is ready to move to its last stage which is Testing and maintenance stage.

Table 5. Work Package 4

Work Package No	4
Work Package Name	Prototype Implementation and Test Study and
	Maintenance (Test & Maintenance stage)
Start-End Date and	9 <sup>th</sup> June to14 <sup>th</sup> June 2021
Time	
Related Organizations	

# 1- List the activities of work packages.

- Back and front-end testing
- System evaluation

- Unit and integration testing
- Database testing

## 2- Describe the methods and parameters that will be used for work package.

- Database testing
- Interface testing by all team members
- Testing real users' opinions about project usability
- Analysis of Algorithms

## 3- List the experiments, tests and analysis in the work package.

- Unit and Integration Testing
- Review the codes
- Modify codes if needed
- Re-test modified codes if needed
- Completion of testing stage.

## 4- List the output of work package and its success criteria's.

#### **Outputs:**

Reporting test results and the project is ready to be released

#### **Success Criteria's:**

The Website should pass all the testing criteria perfectly with all errors fixed.

## 5- Explain the relation of output with other work packages

By completing this stage, the project is ready to be released and used by users under the condition that all expected results are satisfying.

Figure 2. Gantt Chart

	Websites Evaluation	Using Opinion Mining	System Worl	rflow Plan								
								2021	_	_	_	_
WP NO	WORKSTEPS	TIME	START DATE	END DATE	March	April	Мау	June	Apr	August	Artohor	
WP1:	Project Feasibility and Pre-Research (SRS-Feasibility stage)	17 Days	9.03.2021	25.03.2021					Ш	$\perp$	$\perp$	I
1.1.	Project Process and Economic Feasibility								Ш	$\perp$	$\perp$	$\perp$
	* Project Initiation								Ш		丄	1
	* Economic feasibility analysis								Ш	_	_	4
	* Analysis of similar products								Ш	_	_	4
	* Market research								Ш	_	$\bot$	4
	* Identification of the requirements and cost analysis of relevant sectors								Ш	_	4	4
	*Analysis of Workflow								Ш	_	_	4
1.2.	Technological Feasibility								Ш	_	4	4
	* Output technical and technological requirements analysis								Ш	_	4	4
	* Determine the technological resources will be needed in the project								ш	_	4	4
	* Literature and patent research								ш	_	4	4
	* Examination of similar national and international projects made by applied technology								ш	$\dashv$	4	4
	* Conceptual design								ш	$\dashv$	+	4
	* Potential research approaches and methods								₩	$\rightarrow$	+	4
	* Software requirements analysis								ш	$\rightarrow$	+	4
	Web Based System Design Technology (SRS-design stage)	17 Days	26.03.2021	9.04.2021					₩	+	+	4
2.1.	Determining the System Parameters								Н	+	+	4
2.2.	Design of System								Н	+	+	4
2.3.	Selection of the device to be used								Н	$\dashv$	+	4
2.4.	Material and Supplier Selection						_		Н	+	+	4
2.5.	Evaluation of System Design and Revisions								Н	+	+	4
	Web Development of System Software (SRS-Development Stage)	59 Days	10.04.2021	8.06.2021					$\vdash$	+	+	4
3.1.	Concept Development and Needs Analysis						_		$\vdash$	+	+	4
_	* Web System concept for software development				_				Н	+	+	4
	* System requirements / needs analysis								$\vdash$	+	+	+
	* Solution and research or technical models to determine				_		_		₩	+	+	+
3.2.	Creating a Database				_		_		$\vdash$	+	+	+
_	Classification and associated to the Database								$\vdash$	+	+	+
_	* Development of Inquiry module (Queries)  * Accuracy optimization studies								$\vdash$	+	+	+
3.3.	Software development			_	_				Н	+	+	+
3.3.					_				$\vdash$	+	+	+
_	* Establishment of the structure and the establishment of the necessary server software  * Algorithm Modeling			_	_				$\vdash$	+	+	+
	* Create a System X programming language for Web services			_	_				$\vdash$	+	+	+
	* The creation of the database connection module between Web services								$\vdash$	+	+	+
	* User Interface Design and Programming								$\vdash$	+	+	+
	* Creating User Reports received by the Information								$\vdash$	+	+	+
3.4.	Software Integration								$\vdash$	+	+	+
2.4.	* User interface, the creation of links between Web services and database module								$\vdash$	+	+	+
	* User interface testing								$\vdash$	+	+	+
	* Establishment of the structure and the establishment of the necessary server software								Н	+	+	+
	* The data can be saved to disk and processing database								Н	+	+	+
	* Security and performance optimization								Н	+	+	+
	* The creation of user reports								Н	+	+	+
	* System Testing and Required Revisions								$\vdash$	+	+	+
WP4:	Prototype Implementation and Test Study (SRS-Test & Maintanance stage)	8 days	9.06.2021	14.06.2021						+	+	+
5.1.	Interface Tests									+	+	+
5.2.	Mobile application testing	-							$\Box$	+	+	+
5.3.	Testing of database and application server									+	+	+
5.4.	Testing on real users of the system								Н	+	+	+
5.5.	Displaced by the Implementing Agency Assessment and Testing	-							$\vdash$	+	+	+
5.6.	Test Results Analysis and System Evaluation								Н	+	+	+
5.7.	Establishing Standards Certification								Н	+	+	+
5.8.	Completion of Improvements	-							$\vdash$	+	+	+
5.9.	Project Closure								$\vdash$	+	+	+

# **List of Milestones**

Table 6. List of Milestones

	<b>Description of Output</b>	<b>Expected Time Interval</b>
1	Feasibility Studies and Pre-research	9 <sup>th</sup> March to 25 <sup>th</sup> March 2021
2	System Design	26 <sup>th</sup> March to 9 <sup>th</sup> April 2021
3	System Development	10 <sup>th</sup> April to 21 <sup>st</sup> May 2021
4	User Interface and Database Designing	22 <sup>nd</sup> May to 8 <sup>th</sup> June 2021
5	Testing and maintenance stage	9 <sup>th</sup> June to14 <sup>th</sup> June 2021

Table 6. List of Milestones

# **List of Risks**

Table 7. List of Risks

Risk	Probability	Effects	Your Strategy
The time required to develop the software is underestimated.	High	Serious	Build a cohesive team in which all the project requirements should be implemented in the best way possible. Use proper plan and stick to it.
Software tools cannot work together in an integrated way.	High	Tolerable	We will investigate changing or buying new tools that helps us finish our work.
Customers fail to understand the impact of requirements changes.	Moderate	Tolerable	We will prepare a brief document explaining on it everything related to the impact of requirements changes or if applicable we can just meet with the customer and understand from him what things he did not get and thus explain to him using an understandable language.
The rate of defect repair is underestimated.	Moderate	Tolerable	Replace potentially defective components with more reliable bought-in components.
The size of the software is underestimated.	High	Serious	Investigate buying SW components; Investigate use of a program generator.
Code generated by code generation tools is inefficient.	Moderate	Insignificant	Either write the code in different language or use different compliers or interpreters. Since this risk is always estimated we need to prepare high professional programmers at the first stage.
Key staff are ill at critical times in the project.	Moderate	Serious	Reorganize team so that there are more overlaps of work and people therefore understand each other's jobs.
The database used in the system cannot process as many transactions per second as expected.	Moderate	Serious	Investigate the possibility of buying a higher-performance database.

#### **Commercialization Potential**

The WebRating has huge commercialization potential because it will compare sites between all confirmed and entered sites by admin. And the RatingWeb will continue to enter new sites continuously in it. The project will be publish to global and, many user feedbacks will be gained and improvements with new features and bug fixes will be implemented

## **Project Economic Expectations**

Table 8. Project Economic Expectations

2- List your expectations to your team which are come by your project							
Time-to-market (month):	June 2021						
The expected increase in sales revenue	%15						
(%):							
The expected increase in market share	%30						
(%):							
Time to start to gain:	December 2021						

# Instrument / Equipment / Software / Release Purchases

Table 9. Instrument/Equipment/Software Purchases

Proje	ct Name																																											
Line no	Instrument / Equipment / Software /	No.	Capacity	Technical specification	Purpose of Project Activities	Post-Project Place of Use / Purpose		•		•		•		•		•				Use / Purpose Unit Pric	Post-Project Place of Use / Purpose		•		•		•		•		•		•		•		•		•		•		Unit Price (TL)	Total Amount (TL
	Publication Name	Item			•	R&D	Production																																					
1	Internet Connection	1		Min. 6 Mbit	Connection	test	Communic ation	100 USD	800 <u>tl</u>	800																																		
2	MacBook Pro	1		Min. i5 – 8gb	organization	Emulatio n	test	1650 USD	13.000 tl	13,000																																		
3	Website Hosting	1		Min 100gb Bandwidth and 30gb Storage	database	х		120 USD	980 <u>tl</u>	980																																		
4	SQL	1	UNDEFIN ED		database	х		120 USD	980 <u>tl</u>	980																																		
5	Corel Draw	1		UI Design	x			855 USD	6.980tl	<u>6,980</u>																																		
6																																												
7																																												
8								·																																				
9																																												
10									TOTAL	22.740 TL																																		

# **Quarterly Estimated Cost Form (TL)**

Table 10. Quarterly Estimated Cost Form

Project Name :				
Continue	2018-2	2019	TOTAL	TOTAL COST RATE OF
Cost Item	ı	II	(TL)	CONTENTS (%)
Personnel	10,000	35,000	45.000	
Travel	2000	4000	6000	
Instrument / Equipment / Software / Publications	22.740	-	22.740	
Domestic Works Made <u>By</u> R & D and Testing Institutions	-	-		
International Works Made By R & D and Testing Institutions	-	-		
Domestic Services Procurement	-	-		
Overseas Service Procurement	-	-		
Material	-	-		
TOTAL COST	*Depends that time's needs	*Depends that time's needs		100
CUMULATIVE COST			73.740	100
	IN THE PRO	DJECT TOTAL MAN-MONTH	,	73.740

Perform estimation of effort (Man/month), required total time duration and required number of team members by using COCOMO approach

# Basic Cocomo Model (Organic type Mode):

 $KLOC = FP \times (LOC / 1000) = 2.50$ 

LOC = Language Factor x FP = <u>Java(53)</u> x 47.17 = 2500.01

FP=UFP\*(0.65+0.01\*DI) = 53\*(0.65+0.01\*24)=47.17

Effort = person-month = a\*(KLOC)b=2.4\*(2.50)1.05=6.28

Duration in month=  $c^*$ (person-month)d= 2.5 x (6.28)0.38 = 5.02 months

# of people = Effort / Duration = 6.28 / 5.02 = 1.25 person required

+‡+

<u></u>							
Measurement Parameter	Simple	Weight	Average	Weight	Complex	Weight	Sum
Number of external inputs (EI)	1	3	2	4			1*3 +2*4 =11
2. Number of external outputs (EO)			2	5			10
3. Number of external inquiries (EQ)			2	4			8
4. Number of internal files (ILF)			1	10			10
5. Number of external interfaces (EIF)			2	7			14
SUM = UFP							53

Table 11 Measurement Parameter

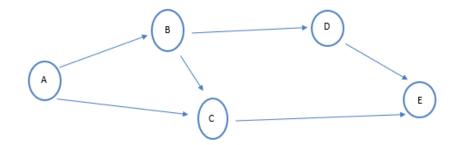
	<u>Factor</u>	Complexity	Complexity
			<u>Value</u>
<u>1</u>	Data	Moderate	3
	Communication		
<u>2</u>	Performance	Significant	4
	Criteria		
<u>3</u>	Online Data Entry	Moderate	3
<u>4</u>	Online Updating	Moderate	3
<u>5</u>	Ease of Operation	Essential	5
<u>6</u>	Portability	Moderate	3
<u>7</u>	Maintainability	Moderate	3
		DI=?	24
		UFP=?	53
		FP=?	47.17

Table 12. UFP/UF/DI Calculations

# CPM (Critical Path Management) analysis by using PERT (defining paths):

Activity	Description	Processes	Time estimated	ES	EF	LS	LF	Stack time
			(days)					time
A	Feasibility studies and research	-	2 weeks	0	2	2	4	2
В	System design	А	2 weeks	2	4	6	8	4
С	System Development	А, В	6 weeks	4	10	4	10	0
D	User interface and database	С	3 weeks	4	7	7	10	3
E	Testing and maintenance stage.	D, C	1 week	10	11	11	12	1

ES	Act.	EF
LS	Dur.	LF



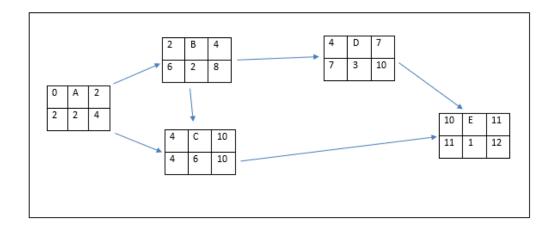


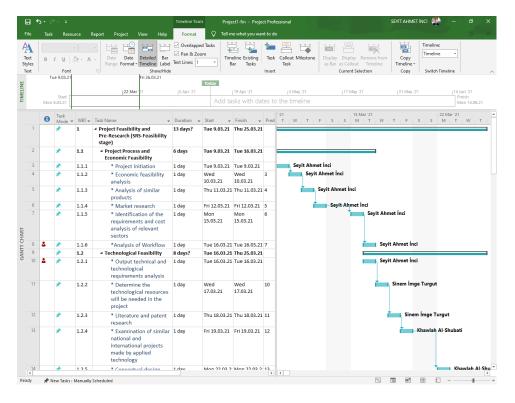
Table 13. Critical Path Management

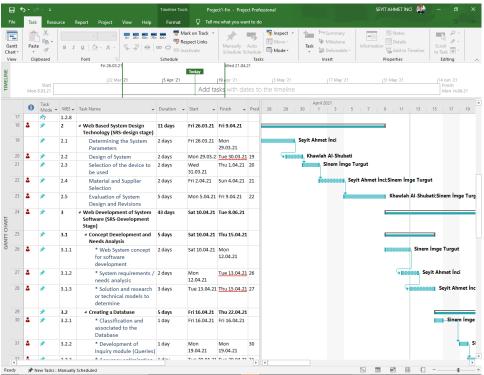
# Calculating probability of successful completion rate for each paths:

	Expected Time [(o+4r+p)/6]	Optimistic	Realistic	Pessimistic	σ	σ² Variance	Probability of Completing	% Success Rate
Work Package Name	Maria Maria	Time	Time	Time	-		Each Task	P(z) =
Feasibility Studies								0,5987,
and Pre-research	12,99666667	13,98	15	4	2,766678	7,65450593	0,254327797	%59,87
								P(z) =
			220					0,5000 ,
System Design	14,05	13,3	14	15	0,080278	0,00644452	0,006347616	%50 P(z) =
							_	0.4840,
System Development	42,33333333	41	42	45	0,444444	0,19753086	0,042317437	%48,40
								P(z) =
User Interface and								0,5000,
Database Designing	15	14	15	16	0,111111	0,01234568	0	%50
								P(z) =
Testing and maintenance stage	0.05222222	7 22	8	9	0.0704	0.00614666	0.00677070	0,5000 , % <b>50</b>
	8,053333333	7,32	8	9	0,0784	0,00614656	-0,00677079	7030

Table 14 Probability calcullations

#### WBS:





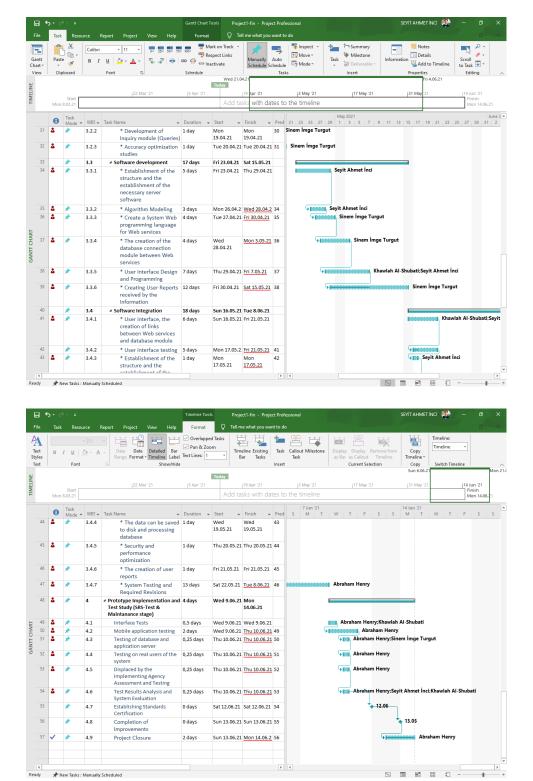


Figure 3. WBS

#### Network Diagram

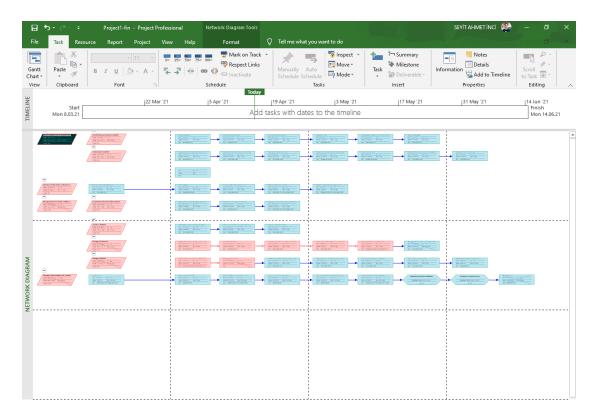


Figure 4 Network Diagram

# 3. REQUIREMENTS ANALYSIS

#### 3.1 Functional Requirements

In RatingWeb system, there are many functional requirements that some of them will be mentioned here and others will be talked about:

- The user should be able to navigate between the tabs of different websites.
- The user should be able to login and logout of the system.
- The user should have either used the website before or is looking to use a certain website.
- The user should be able to navigate between the tabs of different websites.
- The user should be able to login and logout of the system.
- The user should have either used the website before or is looking to use a certain website.

- The user needs to be honest and biased when giving his opinion.
- The admin should have to be in contact with the website's owner.
- The admin needs to be aware of all new created websites so as to add them to the system to be rated.
- The admin should be able to add and describe the website.
- The admin should focus more on the websites that prompts the user to transfer money or do payments since such websites have the biggest priority for rating.

# Use case diagram:

For use case diagram you can check Figure 7 – Page 34

# Class diagram:

For use case diagram you can check Figure 6 – Page 33

# **Sequence diagram:**

For use case diagram you can check Figure 8 – Page 36

#### **IEEE standards:**

The ethics and standards of the institute of electronics and electrical engineering are applied in this project.

#### 3.2 Non-Functional Requirements (Seyit did it)

#### Reliability:

The system should be available when requested for service by users: The system should work 24/7, it should always be up and running so that whenever the user wants to use it, it is available.

The system should have a very low failure rate: The failure rate should be kept as minimal as possible, preferably less than 0.01

#### Performance:

The system must have a good response time.

The load time for the User interface should take less than two seconds.

It should be able to respond to multiple numbers of people at the same time.

The log in information should be verified within five seconds.

Queries shall return results within five seconds.

The system should be able to achieve a lot in a specified amount of time.

The system should be able to withstand a heavy workload.

The system must run error free while operating with a huge set of data.

The system should be precise and accurate when dealing with data.

The admin should be able to add, edit and delete showed websites in the RatingWeb

The admin should be able to add, edit and delete comments in the Rate Website's page.

The admin should be able to add, edit and delete contents in the help page.

The admin should be able to add, edit and delete informations in the about page.

The admin should be able to add, edit and delete informations in the contact us page.

The admin should be able to add, edit and delete settings options.

The user should be able to rate websites in the Rate Website's page

The user should be able to add comment in the Rate Website's page

User should easily share his view about the website (feedback).

#### Security:

All external communications between the system's data server and users's must be encrypted by Hasting. Hashing is a one-way function where a unique message digest is generated from an input file or a string of text. No keys are used

To ensure that the system is secure, access to the various subsystems will be protected by a User log in screen and requires a User information (Mail, Name, Pass-word).

To avoid loss of data in case of system failure, all system data must be backup every 24 hours and the backup copies stored in secure location different from the system. The system data should be stored in storage device e.g. hard drive, CD, Flash drive(USB) or it could be stored in files.

#### **Usability:**

The system should have a well formed, easy and soft to use graphical User interface.

The system should be User friendly.

The system must be easy to learn for both novices and Users with experience from similar systems.

The User must understand what the system does.

The User must feel satisfied with the system.

The system must be easy to remember for the casual user.

The user must feel satisfied with the system

#### Safety:

The system should maintain a good backup: Maintaining backups ensures that the system's database is secure, which means that in case of an emergency or accident the system can be easily restored.

#### Maintainability:

The system should be easy to maintain.

In order for the system to be easy to maintain it is done with a web-based, which is easy to maintain and which are Visual Studio and SQL.

Maintenance of the system should be cost efficient

Maintenance of the system should be less frequent.

The system should easily adapt to changes made

3.3 Realistic constraints

After calculating the whole constraints of the project, we found out that the project as

a whole will cost no more than 22.740 Tl.

**Economic:** 

the need of investments is all for the project owner, for users it will be free to use and

navigate: any person looking forward to know the genuineness of any website can use

the system as well as if any person has used any particular website and want to share

his experiences using that website can share his opinion in his comment section.

**Environmental:** 

This type of systems is all software which will not contribute to any pollution except

for the device it is used in, it will need a big memory and high-speed processors.

**Social:** 

there are no social constraints for such system, anyone can use.

Political: There are no political constraints as well.

**Ethical:** 

the users' must be honest when writing their comments on a website according to their

experience.

Users' information should be kept confidential in the database.

There should be no offense for other users in the system.

#### **Health and safety:**

using such system will not affect the health of the user for any reason unless they stay a long time navigating the website which might harm their eyes.

#### **Sustainability:**

yes, the product can be used over the long term as long as both users and admins maintain the ethical approaches and constraints.

#### 3.4 Ethical issues

- website acts consistently with the public interest
- ensures that their products and related modifications meet the highest professional standards possible.
- managers and leaders shall subscribe to and promote an ethical approach to the management of software development and maintenance.
- the users' must be honest when writing their comments on a website according to their experience.
- Users' information should be kept confidential in the database.
- There should be no offense for other users in the system.

#### 4. DESIGN

## 4.1 High level design (architectural)

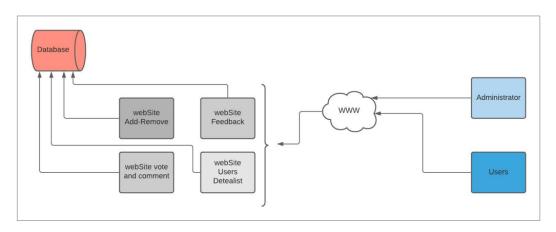


Figure 5 Architecturel Diagram

# 4.2 Software design

## Class Diagram

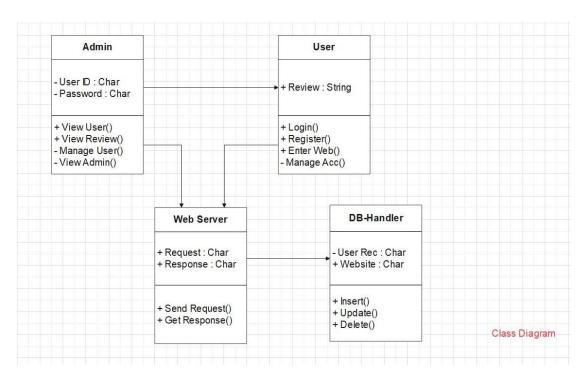


Figure 6 Class Diagram

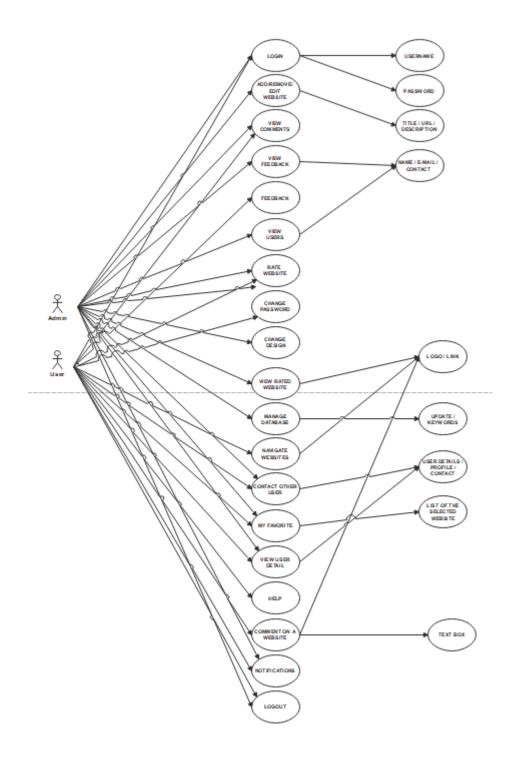


Figure 7 Use Case Diagram

Use Case Table

Functional Requirements	USER	ADMIN
Login with username / password	~	-
Add / Remove / Edit website		~
View Comments	~	~
View Feedback		~
Feedback	~	
Check user ID / E-Mail		~
Rate Website	~	~
Change Password	~	V
Search Website	~	~
Notifications	~	~
View Reted Website	~	~
Comments on a Website	~	
Help	~	
Contact Other Users	~	~
View User Information		~
Manage Database		~
Change Design		-
My Favorite	<b>V</b>	~
Navigate Website	~	
Logout	~	~
View Details	~	~

Table 15 Use Case Table

Sequence Diagram

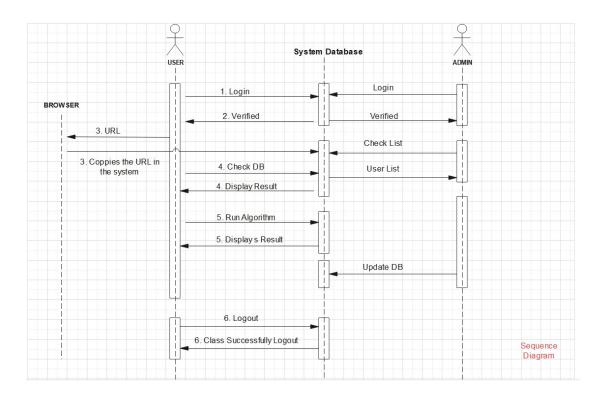


Figure 8 Sequence Diagram

## **BPMN** Diagram

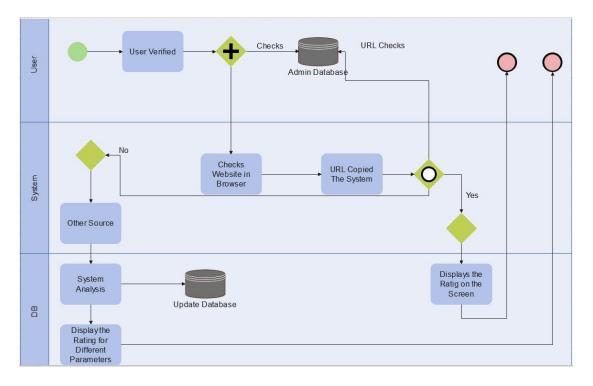


Figure 9 BPMN Diagram

### Data Flow Diagrams

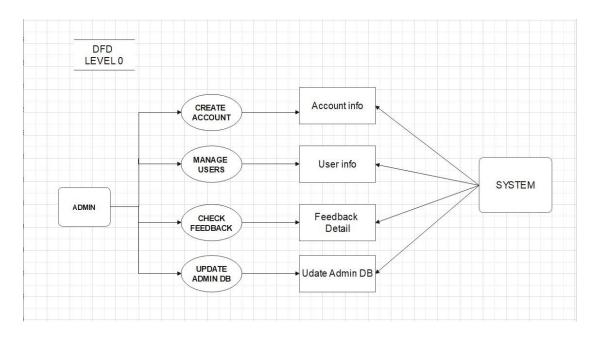


Figure 10 DFD LEVEL O

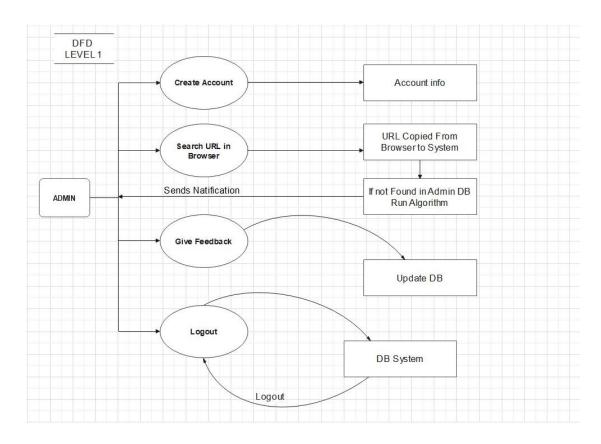


Figure 11 DFD LEVEL 1

# ER Diagram

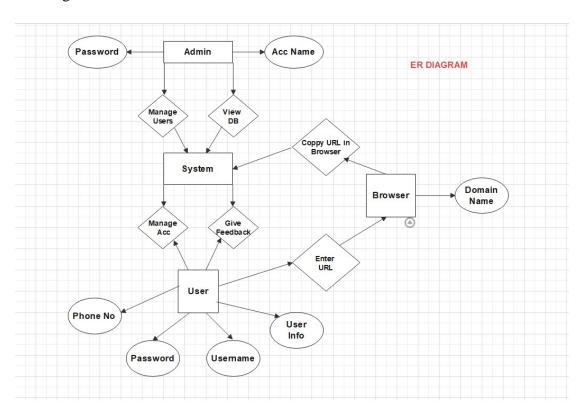


Figure 12 ER Diagram

### Activity Diagram:

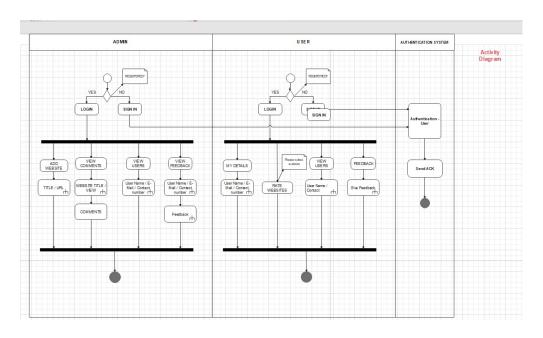


Figure 13 Activity Diagram

### 5. USER GUIDE OF THE SYSTEM

#### **Home Screen:**



Figure 14 Home screen

**Login Screen:** 



Figure 15 Login Screen

### Admin screen:



Figure 16 Admin Screen

### User's screen:

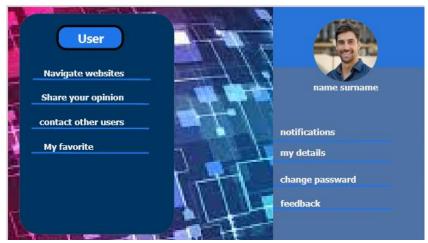


Figure 17 User's Screen

# **Get instant help:**

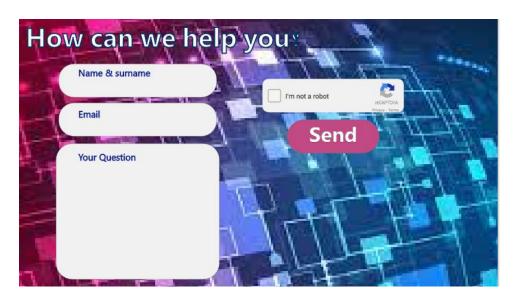


Figure 18 Help Screen

### Send your feedback:

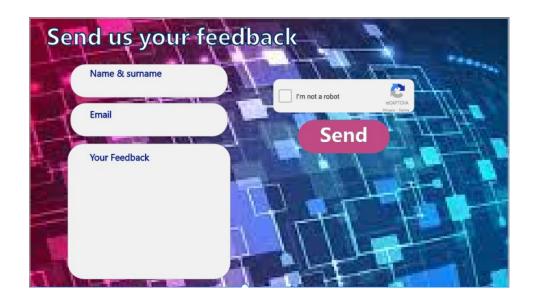


Figure 19 Send Feedback Screen

### Add website feature for admin:

The admin shall add title and URL of the needed website and description.



Figure 20 Add website Screen

#### View feedback for admin:

The admin can view the users' information and feedback, thus reply in case they want to.

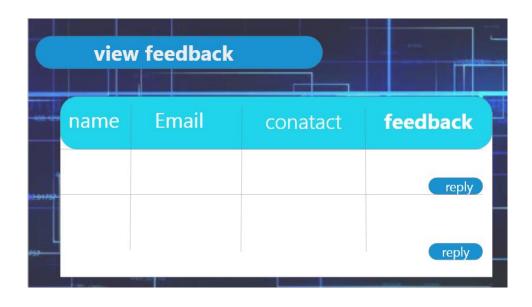


Figure 21 View feedback Screen

# Change password window for both admin and user:



Figure 22 Change Password Screen

#### **Comment on website:**

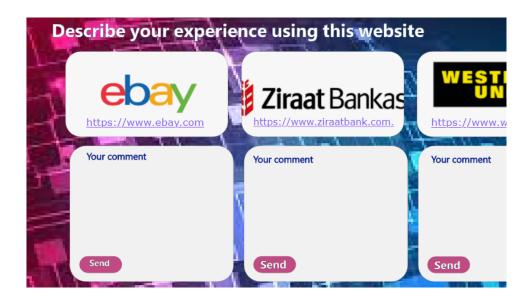


Figure 23 Comment on website Screen

### View user's information for admin:



Figure 24 View user's information Screen

#### View comments for both admin and user:

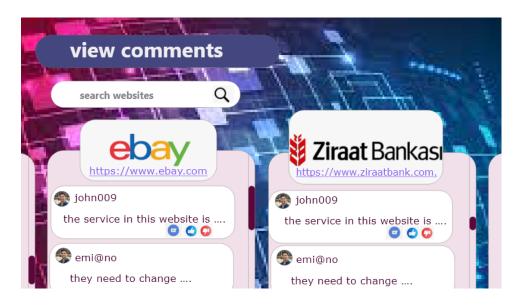


Figure 25 View comments Screen

#### 6. DISCUSSION

The RatingWeb can be of great relief to all the people. RatingWeb is a not-for-profit and an open for new suggest project which has a good probability for increasing the trust of people to websites by taking feedback from them. Here we propose an advanced Website Evaluation system that rates the website based on the opinion of the user. Website will be evaluated based on factors such genuineness of the website, timely delivery of the product after online transaction and support provided by the website. User will comment about the website, based on the comment system will rate the website and users can see other people 's comments, ideas and complaints so that, the user who wants see other people opinion it's really get beneficial. Therefore, by rate of websites, will be clear point to show user how much people like it. The system takes opinion of various users, based on the opinion; system will decide whether the website is genuine or not. The system uses opinion mining methodology in order to achieve desired functionality. We use a database of sentiment based keywords along with positivity or negativity weight in database and then based on these sentiment keywords mined in user comment is ranked. The system contains keywords related to fraud, genuineness, timely delivery of the product and service meters in the database. Based on these factors system will rate the website.

And the RatingWeb designed according to people ideas. RatingWeb is a project that open to new ideas and basically developing it-self regularly. We mean that with people's feedback we going to uptade ourwebsite. Such as; Adding new Website, Adding new features (Save a website for look again), etc.

### 7. CONCLUSION

This project creating for the important goal that's want to share a safe and trustable web sites for everybody. Every user who needs comment and share opinions with other people; want to trustable and useful data coming from real users.

By RatingWeb project, user can easily find out which website will deliver the product in time. And also helps to find out website which will provide good support. This application helps to find out whether the website is genuine or not that is useful for those users who do online transactions.

It is a great application considering it has been developed in only 3 months which is a relatively short time. The RatingWeb has the potential to grow further and further as new features gets added in the future and I predict a bright successful future for the application.

#### 8. REFERENCES

[1] Website rating using opinion mining:

https://nevonprojects.com/website-evaluation-using-opinion-mining/

- [2]. IEEE Recommended Practice for Software Requirements Specifications. (1998). Ieeexplore.ieee.org. Retrieved 27 May 2017, from <a href="http://ieeexplore.ieee.org/document/720574/">http://ieeexplore.ieee.org/document/720574/</a>
- [3]. IEEE Recommended Practice for Software Design Descriptions. (1998). Ieeexplore.ieee.org. Retrieved 27 May 2017, from <a href="http://ieeexplore.ieee.org/document/741934/">http://ieeexplore.ieee.org/document/741934/</a>
- [4]. Project Management Software | Microsoft Project. (2016). Products.office.com. Retrieved 27 May 2017, from https://products.office.com/en-us/project/project-andportfolio-management-software?tab=tabs-
- [5]. Software Design Tools for Agile Teams, with UML, BPMN and More. Visualparadigm.com. Retrieved 27 May 2017, from <a href="https://www.visual-paradigm.com/">https://www.visual-paradigm.com/</a>
- [6]. Flowchart Maker & Diagramming Software, Microsoft Visio. (2016). Pr oducts.office.com. Retrieved 27 May 2017, from https://products.office.com/enus/visio/flowchart-software?tab=tabs-1
- [7]. MockFlow Online Wireframe and UX Tools. Mockflow.com. Retrieved 27 May 2017, from https://www.mockflow.com