FINDTAD



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THESIS COMPLETION CERTIFICATE

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It is to certify that the above students' project has been completed to my satisfaction and to my belief, its standard is appropriate for submission for evaluation. I have also conducted plagiarism test of this thesis using HEC prescribed software and found similarity index at ______ that is within the permissible limit set by the HEC. I have also found the thesis in a format recognized by the department.

Supervisor's Signature:

Baseer

Date: 08/06/2021

Name: Dr Abdul Baseer Qazi

CERTIFICATE OF ORIGINALITY

This is certified that the intellectual contents of the project **<u>FindTad</u>** are the product of my/our own work except, as cited properly and accurately in the acknowledgements and references, the material taken from such sources as research journals, books, internet, etc. solely to support, elaborate, compare, extend and/or implement the earlier work. Further, this work has not been submitted by me/us previously for any degree, nor it shall be submitted by me/us in the future for obtaining any degree from this University, or any other university or institution. The incorrectness of this information, if proved at any stage, shall authorities the University to cancel my/our degree.

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Abstract

It is an Online Web Application which is related to finding lost child. It is basically "Lost Child Data Bank". When the child is lost, then Parents register themselves and input the name, image, and some necessary details of their lost child. When finder will find the child then he simply captures the image of child and upload on to the application. If both images will match (parents input the image of their child and finder upload the image of the lost child) then the details of the child display on the screen to finder where he can contact to parents easily. Finder can also add child to suspicious list if the image of child does not match. And parent can also view suspicious list before registering their child to the application. The main aim of this application to assist the parents to find their lost child in less time and in effective way. Our application will work accurately and efficiently match and recognize the image of child. Basically, we develop a system that will replace the traditions like announcements in mosques and visiting police stations. Our system has some prominent features like only authentic user can login and use the application, child will find by artificial intelligence-based searching technology and details of the parents and child will not publicly available.

Keywords: Artificial Intelligence, Web Application, Suspicious List, Lost Child Data Bank

Dedication

This thesis is dedicated to:

The sake of Allah Almighty and messenger Muhammad (P.B.U.H.) who taught us the purpose of the life.

Our families, who never fall for the countless number of ways to guide us through the valley of darkness, of joy, of light, of hope, and support.

Our supervisor Dr Abdul Baseer Qazi, who taught us that even largest tasks can be accomplished if it is done one step at a time.

Our friends, who encourage and support us in difficult time.

Acknowledgments

In the name of Allah, the Most Merciful, the most compassionate, praise be to Allah, and prayers and Allah's messenger, Muhammad (P. B. U. H).

We must acknowledge gratitude to Allah the Almighty for His help and blessings of the lord. We believe that this work would not have been true but as His guide.

We would also like to thank our families for the generous support they have given me throughout the whole of our lives, and in the process of completing my bachelor's degree. To thank them for their unconditional love and pray about it. We will have a chance to complete this project.

We are grateful to our supervisor, Dr. Abdul Baseer Qazi, who has been working hard with us to complete the project, to be generous at all stages of the research.

We would like to take this opportunity to thank all our friends and fellow classmates, to support us in the project as a whole.

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Chapter 1 Introduction

1.1. Motivation

Every year, thousands of the children lost in streets, towns, and cities of Pakistan. Some children are too small to tell their names that makes difficult to finding their addresses. In this situation, parents usually go to mosques for annunciation of their child or go to police station for investigation, where do not get positive and quick response. Unfortunately, there is no proper system to assist parents in difficult situation. Therefore, we develop a system in parents can easily and efficiently find their child from a web application.

1.2. Problem statement or research questions

- 1. To assist the parents to find their child, we need a system that is accurate, efficient and user friendly.
- 2. If we continue with our traditions like visiting police station and mosque, it will be too difficult for parents to find their child.

1.3. Objectives

To this end the main objectives of thesis are:

- 1. To assist the parents to find their children in less time.
- 2. To develop a system that will work accurately and efficiently match and recognize the images of children.
- 3. To develop a system that will reduce difficulties of Parents related to lost children.
- 4. To develop an online system that will replace the traditional announcements in Mosques and visits to Police stations.

1.4. Main contributions

We developed a system that finds lost children in less time with accuracy and efficiency will surely assists parents. As we wrote earlier those thousands of children lost in our country every year, that is why our system will make impact in society and make eases for the people.

1.5. Report organisation

Chapter 1 consists of introduction of the report where we discuss objectives, motivation, problem statements and report organization.

Chapter 2 is about background study and its key concepts.

Chapter 3 includes with system requirements, what system will do under different circumstances.

Chapter 4 comprises with system design and its architecture. It consists of diagrams.

Chapter 5 discusses about how system is implemented.

Chapter 6 includes all the testing like unit, integration and system testing and the test cases and their results.

Chapter 7 concludes the report by summarising different aspects of the work.

Chapter 2 Background Study/Literature Review

[1] Centre for Missing Children Kenya. (2015). Retrieved May 20, 2016, from Centre for Missing Children Kenya

The case of the missing children is perhaps one of the most enthusiastic about social problems in the world. There are children all over the world, drug development, a coordinated crime, the abuse of the company, acts of sexual violence, the illegal reception of a variety of reasons. The main objective of this work was to identify the social factors that affect the fragility of the missing people, and for the children, the children's pre-trial Detention Centre in Nairobi, Kenya. The study was based on a hypothesis, of course, within the context of Bronfenbrenner. In this study, using in sync with each other, mixed techniques, approaches, in which it became clear that to get the error-free plans for both the quantitative and subjective terms. Objectively, the people are the children of the officers, the guardian, and the child is missing, the missing children, and the police department. The sample of 61 children, tested by means of the control of the relocation process. Directed tests are also used to select the respondents in the different classes. The information, studies, FDG, and the instructions for the meeting. Quantitative information has been studied with the help of the black-andmeasurement-of the logic, with the help of the SPSS guide, version 22, and subjective data were analysed using content analysis. The amount of information given, the results were recorded with the help of graphs, tables, charts, and it details the results was carried out at the time. According to the study, most of the missing children (52.4%) were in the age group 7 to 12 years old, and most of them were young men (68.7%). In all cases, most of them are in the age group from 13 to 18 were women, 62.1%. Caregiver-I am the most orphaned children (61.1%), living in a lot of random places (80.4%) and considering the work (60.7%), low wages and salaries. The main reason why the respondents were at risk of going out of the home where child abuse (23.3%)and a child (40%). The payment is made by the parents of the children who are missing or gatekeepers, was an extra in a number of cases of a man and a woman as a prize 0.443) was achieved, which was little more than an exam, p-price, which is equal to 0.05. Apparently, there is no Government insurance for lost children because there are laws, regulations, mechanisms, and rules for the missing child. The investigation

suggests that the government believes that, if the regulations/policies, and the laws of the missing children, the public data is available to each child that has been lost, it is an excellent evil-detection system for use on kids and money, in order to strengthen the keeper of low wages.

[2] Google. (n.d.). What is Person Finder? Retrieved November 20, 2015, from Person Finder.

It is a web application that permits people to post and look for the situation with family members or companions influenced by a fiasco. The program additionally let us press offices, non-administrative offices, and others add to the information base and get refreshes by utilizing the Person Finder API dependent on the PFIF open norm. What is more, sites can decide to implant Google Person Finder as a device on their own pages. Google Person Finder is open-source programming implying that any engineer can make their own case of Google Person Finder after a debacle. Person Finder runs on the Google App Engine stage, and it has been dispatched in more than 40 dialects. We give a valiant effort to ensure it is accessible in the most generally communicated in dialects in catastrophe inclined nations. Google engineers fabricated Google Person Finder because of the January 2010 Haiti seismic tremor to help those influenced by the quake associate with their friends and family. In 2005, during the consequence of Hurricane Katrina, different sites made missing person vaults, so families and help laborers needed to look in various spots when searching for data. Google Person Finder resolves this issue by tolerating information from different vaults in a typical organization and looking over all the information. The basic organization is called PFIF, and it was set up by volunteers of the Katrina People Finder Project.

[3] Nadu, T. (2011). Tracing missing persons remains a challenge. Coimbatore: The Hindu.

Police Commissioner Amaresh Pujari has established a Special Squad for Tracing Missing Persons and the crew involves one Sub-Inspector and two constables. This faculty, since the time a protest of the missing individual is gotten, will give their consideration just on that.

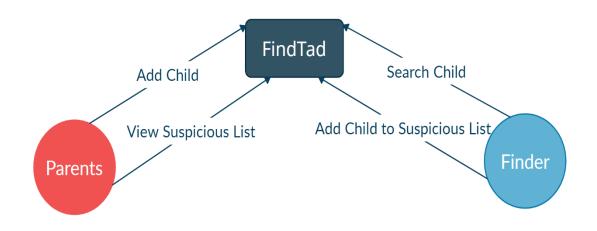
The course adjustment was required because of the lacklustre showing as far as following missing people. In Coimbatore City in 2010, of the 211 people just 166 were

followed and 45 remain untraced. In 2001, of the 305 individuals who disappeared, 232 were followed and 73 are yet to be followed.

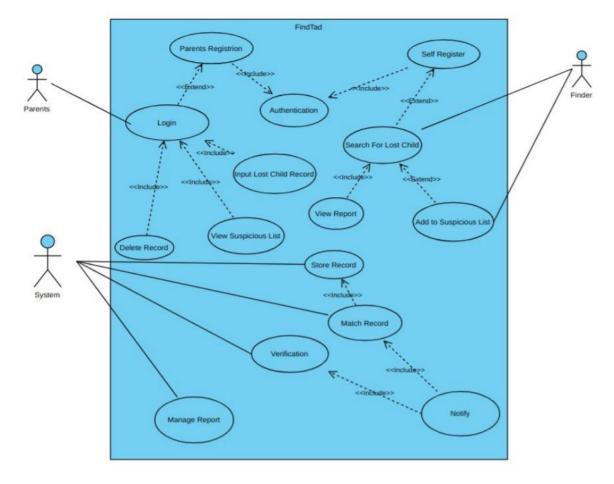
Missing ladies and youngsters stayed a reason for worry, as the law implementing organization needed to break the case to forestall shameless dealing of ladies for tissue exchange and kids for charity chasing (beggary). In West Zone, in 2010 of the 206 people revealed missing just 83 were followed and in 2011 of the 260 announced missing till November, just 109 were followed.

Regularly, the police used to find out if the missing individual was intellectually steady. At that point they used to illuminate their partners in the adjoining States and locale.

2.1. Key Concepts



Chapter 3 System Requirements



3.1. Use Case Diagram

3.2. Functional Requirements

• User Registration:

Use	Case ID:	001	
Use	Case Name:	User Registration	
Acto	or(s):	Parents, Finder	
Pre-	Conditions:	User must be authenticated fir	st.
Prio	ority:	High	
Basi	ic Flow:	User must click on sign in but	ton.
Acto	or Actions		System Response
1	User enters username a	and password in the relevant	1 System check user's provided credentials. If user's
	fields. Users click on "	Sign In" button	credentials are valid, user is authenticated, and home
		-	screen is displayed.
			2 If user's credential is invalid an error message is
			displayed and sign in screen is shown/re displayed.

• Input Lost Child Record:

Use	Case ID:	002	
Use	Case Name:	Input Lost Child Record	
	or(s):	Parents	
Pre	-Conditions:	Parents must sign in into the s	system.
Pric	ority:	High	
Bas	ic Flow:	When Parents enter the input	child registration button, then this screen will open.
Act	or Actions		System Response
1	Parents enters the deta	ils and image of the child.	2 System checks that all the fields are fill or not.
			2 If some fields are missing then give error of "Please
			fulfill all fields"
			3 If all fields all fill then system will give message "Child register successfully" and store data to database.

• Search For a Lost Child:

Use	e Case ID:	003	
Use	e Case Name:	Search for a Lost Child	
Act	tor(s):	Finder	
Pre	e-Conditions:	Finder must sign in and uplo	ad the image or name of child
Pri	ority:	High	<u>v</u>
Bas	sic Flow:	When Finder inputs the image	ge or name of the child then system will match the image or
		names with existing data.	
Act	tor Actions		System Response
1	Finder uploads the	image or input the name of the	2 System checks whether the image or name match with
	child into the searc		the existing images or names.
			2 If both images and data match then it will give message
			of "Successfully Matched".
			3 If system does not match then it will give option to user
			of "Add to suspicious List".

• Verification:

Use	Case ID:	004	
Use	Case Name:	Verification	
Act	or(s):	System	
Pre	-Conditions:	Parents and Finder must input	their data (images, names etc.).
Pric	ority:	High	
Bas	ic Flow:	When both actors input their of	lata into system, then System will match and verify.
Act	or Actions		System Response
1	Store both data into da	tabase.	2 System matches both data.
			2 If both images or data match then it will give message of "Successfully Matched" and notify.
			3 If system does not match then it will give option to user of "Add to suspicious List".

• Delete Record:

Us	e Case ID:	005	
Us	e Case Name:	Delete Record	
Ac	tor(s):	Parents, Finder	
Pr	e-Conditions:	User must be authentic	ated first.
Pr	iority:	Medium	
Ba	sic Flow:	User First SignIn/Sign can delete the record	Up and then register the child record then he
Ac	tor Actions		System Response
1	User click the record list	delete icon from the	1 System first call the delete function
			2 Once the record delete then Pop up successful message will be shown

• Match Record:

Us	e Case ID:	006	
Us	e Case Name:	Match Record	
Ac	tor(s):	Finder	
Pr	e-Conditions:	User must be authentic	ated first.
Pri	iority:	High	
Ba	sic Flow:	User First SignIn/Sign	Up
Ac	tor Actions		System Response
1	User open the ca	amera or upload image	1 System first call the match function
	and then click Sta	art match buttun	2 Fetch all record.
			3 Match the pictures
			4 Once the record match then Pop up
			successful message will be shown

• Manage Report:

Us	e Case ID:	007	
Us	e Case Name:	Manage Report	
Ac	tor(s):	Finder	
Pr	e-Conditions:	User must be authentic	ated first.
Pr	iority:	High	
Ba	sic Flow:	User First SignIn/Sign	Up
Ac	tor Actions		System Response
1	User open the	camera or upload image	1 System first call the match function
	and then click S	tart match buttun	2 Fetch all record.
			3 Once the record match then Pop up
			successful message will be shown
			4. Then the record list will be shown
2	User Click Mate	ch record .	5. Report is Generated

• Add to Suspicious List:

Us	e Case ID:	008	
Us	e Case Name:	Add To Suspicious L	ist
Ac	tor(s):	Finder	
Pr	e-Conditions:	User must be authentic	ated first.
Pr	iority:	High	
Ba	sic Flow:	User First SignIn/Sign	Up
Ac	tor Actions		System Response
1	User Click the a Buttton	add to suspicoious List	1 System Display Related Page
2	User Input Data .	And Save the Data	2. System Save the data in database and then show that data to View Suspicious List Page

3.3. Non-Functional Requirements

• Performance Requirements

The system should be intuitive, and the reaction time should be less. In this way, any system activity, the answer has been no high-speed train delays. If the window is open, the error message will pop up and save the settings to be saved, or of the meeting is delayed, with a little over two seconds. If you need to create a database, organize, and evaluate the issues, so there is no delay, and the actions to be performed for at least two seconds to enter, organize, calculate the location of greater than ninety five percent of the items. At the same time, communication with co-workers, delay, occur together, the change in the ratio of the distance between the two systems, and design, among them such that there is a high probability that the latter will, or will not be as effective for less than twenty seconds, and to fit in.

• Safety Requirements

Information should be securely sent to server with no alterations in information.

• Security Requirements

The fundamental security concern is for clients' accounts henceforth legitim.

3.4. Interface Requirements

• Hardware Interfaces

Device should be enabled with Internet and camera as well for capturing the image at Realtime.

• Software Interfaces

The browser must be HTML5 and JavaScript support for a adequate user experience.

• Communications Interfaces

Communications functions including E-mail (for queries), web browser (for crawling), network server communications protocols. Identify any communication standards that will be used, such as FTP (for transferring the files to local server to online server) or HTTP (for sending request).

3.5. Database Requirements

- Guarantees that people figure out what data is required.
- Increases the capacity to share data across the system.

- Ensures proactive data quality measures are incorporated into systems and data stores.
- Build the connection among data and business processes.

3.6. Project Feasibility

Technical Feasibility

Our system is technically feasible, as we have software and hardware that required in the system and we both group members are technically capable of doing this project.

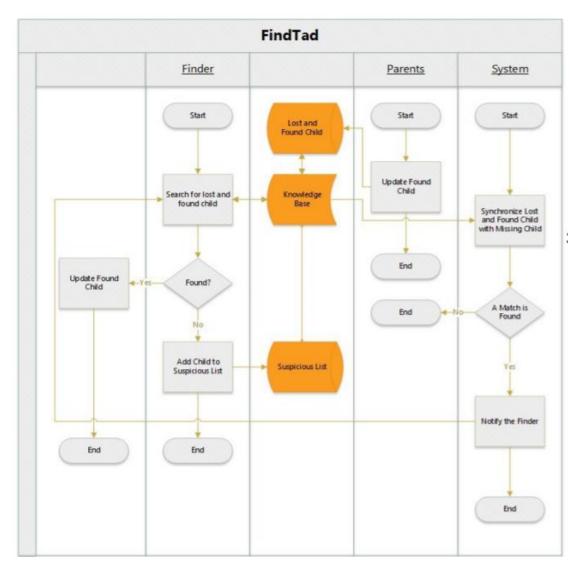
Operational Feasibility

Our system is easy to use with proper guidance to user and we will maintain our system after the deployment according to requirements.

Legal & Ethical Feasibility

Our project is completely legal, as we have not used any copyrighted product in project, and we have proper protection of data of users.

3.7. Analysis Models



Chapter 4 System Design

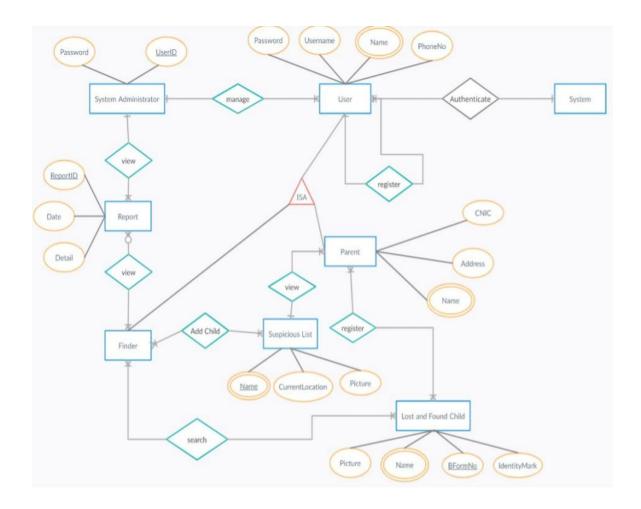
4.1. Design Approach

The object-oriented design makes it possible to develop large-scale applications of independent modules. Object-oriented decomposition provides a method that is more complicated, in place of the original subject, which appears in the system. For some, the subject, the purpose, the functionality of the system, the main components of the package, which was developed outside of the. In parallel, the development and the testing of the individual modules, the need for strict compliance with the specifications of the interface.

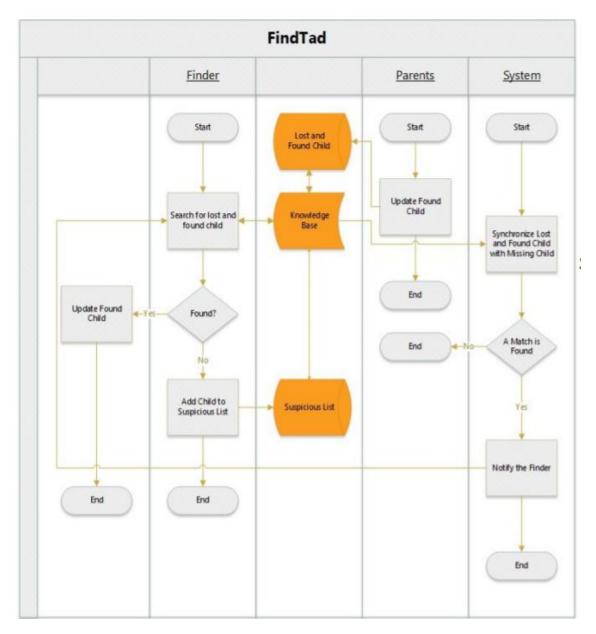
4.2. System Architecture

In FindTad, we used MVC pattern, allows you to share concerns, to split the logic between the 3 buckets, so that the bucket can be operated independently.

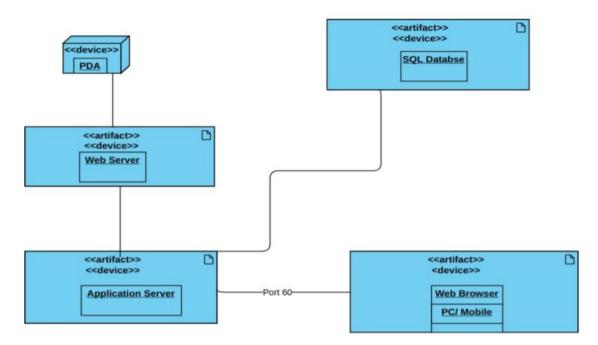
4.3. Logical Design



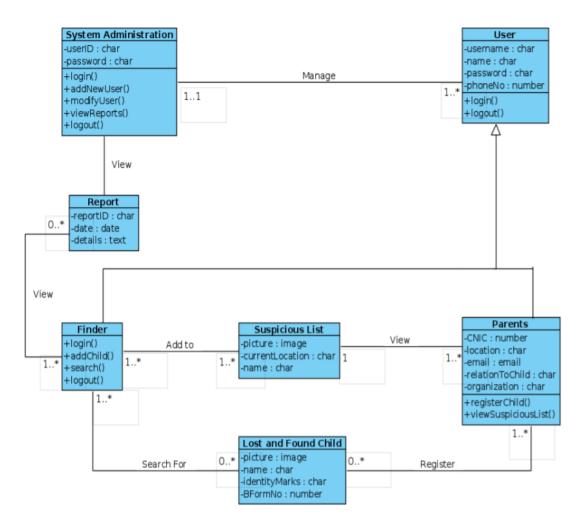
4.4. Dynamic View



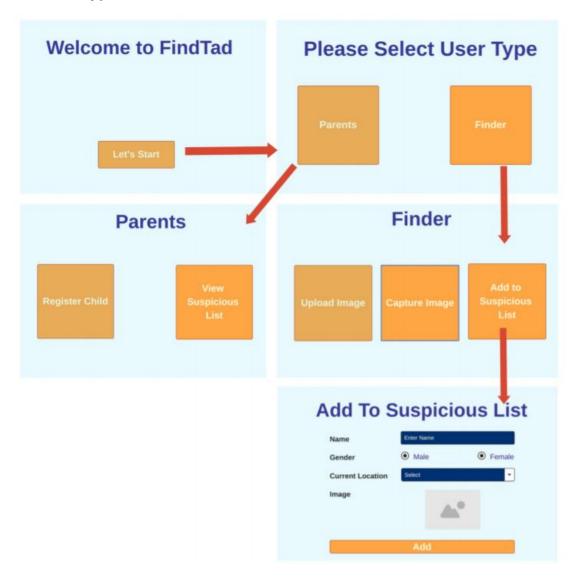
4.5. Component Design



4.6. Data Models



4.7. Prototypes



4.8. User Interface Design

• Home







• Sign In

FINDTAD	Home About Us Team Contact Log In Sign Up
Welcome to FindTad Here you can easily find your child in less time	Parent Ender Sign In Vour Email* Log In

• Sign Up

-		Parent Sign Up
E I	First Name *	Your Email *
Welcome to FindTad	Last Name *	Your Phone *
ere you can easily find	Password *	Please select your Sequrity Question
	Confirm Password *	Enter Your Answer *

- Parents Dashboard
- Profile Settings
- Edit and View Profile

Ξ	FINDTAD				
Welcome Asad Re			Profile	Settings	
٢	Profile	Name	Sumarne Rehman		
•	Add Child	PhoneNumber 03108504579 Email ID			
E	Registeration	asad98587@gmail.com			
()	Suspicious List	Save Changes			
H	Logout				

- Profile Settings
- Add Child

\equiv	FINDTAD				
Welcome Rehman		Name		Age	
<	Profile	Dress		Phone No	
	Add Child	Upload Picture *only jpg or jpeg Upload Choose file	Browse	Missing Location	
IE	Registeration	opioau choose nie	DIOWSE		
¢	Suspicious List				
Ħ	Logout	Save			

- Profile Settings
- Registration

 NAME ACE DRESS PHONE NO MISSING LOCATION ID ACTIONS Asad 15 Purple Shalwar Kamez 0308504577 Bharakhau Islambad c337743-f.0b2-420d-8117-0043b687409 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-	FINDTAD							
 Profile Asad Purple Shalwar Kamez O3008504577 Bharakhau Islambad C33f7434-f0b2-420d-8117-0043b68740f9 C3 C34f7434-f0b2-420d-8117-0043b68740f9 C3 C34f7434-f0b2-420d-8117-0043b68740f9 C3 C34f7434-f0b2-420d-8117-0043b68740f9 C44 	Velcome Rehman								
 Add Child Registeration Suspicious List 			NAME	AGE	DRESS	PHONE NO	MISSING LOCATION	ID	ACTIONS
 Add Child Registeration Suspicious List 		Profile	Asad		Purple Shalwar Kamez	03108504577	Bharakhau Islambad		
🕒 Suspicious List	•	Add Child	angelina		Light Brown Shirt	03108504577	I-8 Marka Big Plaza	f0bc2ec4-e2b6-4145-9c7b-04757916025d	
	E	Registeration							
E Logout	Ģ	Suspicious List							
	Ħ	Logout							

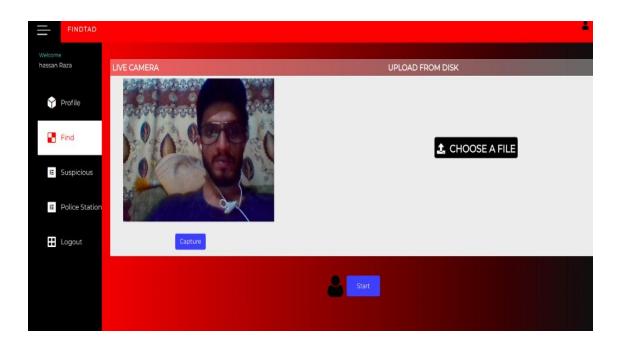
- Profile Settings
- Suspicious List

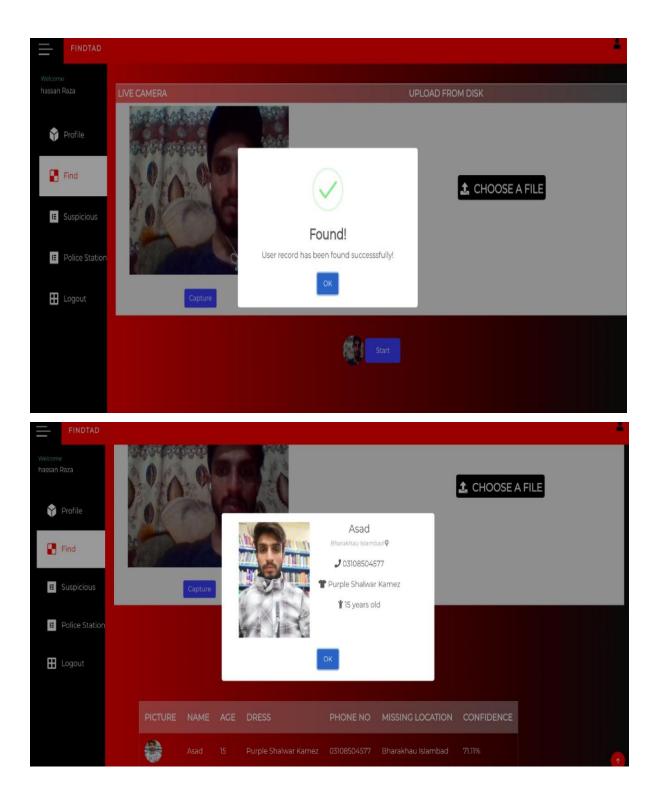
 Profile Asad Purple Shalwar Kamez O3115363440 Bharakhau Islambad Icc3ea88-c26a-4644-8e78-08394ca2858a angelina Purple Shalwar Kamez O3115363440 Bharakhau Islamabad eace198c-c5e3-4caf-81d0-1aeb0e9079d8 	NAME AGE DRESS PHONE NO MISSING LOCATION ID ACTIONS Profile Asad 15 Purple Shalwar Kamez 03115363440 Bharakhau Islamabad 1cc3ea88-c26a-4644-9e78-08394ca2859a Image: Imag	FINDTAD							
Add Child Add Child Chil	Add Child Add Child Registeration Suspicious Li	nan	NAME	AGE	DRESS	PHONE NO	MISSING LOCATION	ID	ACTIONS
Add Child Registeration Suspicious Li	Add Child Registeration Suspicious Li	Profile	Asad	15	Purple Shalwar Kamez	03115363440	Bharakhau Islambad	1cc3ea88-c26a-4644-8e78-08394ca2858a	
E Registeration	Registeration Suspicious Li	Add Child	angelina		Purple Shalwar Kamez	03115363440	Bharakhau Islamabad	eace198c-c5e3-4caf-81d0-1aeb0e9079d8	
	Logout								
		Logout							

- Finder Dashboard
- Profile Settings
- Edit and View Profile

FINDTAD				•
Welcome hassan Raza			Profile Settings	
		Surname		
Profile	hassan	Raza		
	PhoneNumber			
🔚 Find	03115363447			
	Email ID			
IE Suspicious	hassan98587@gmail.com			
E Police Station	Save Changes			
Logout				

- Profile Settings
- Find

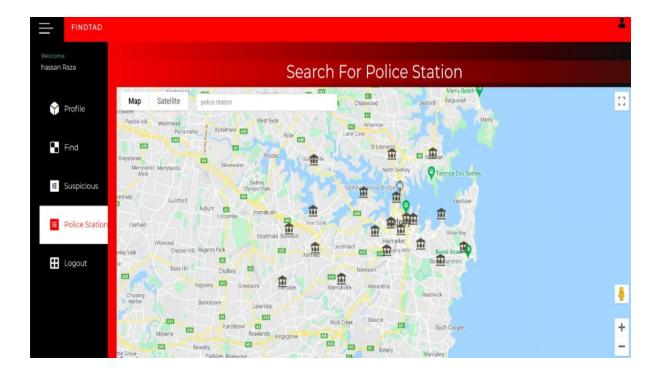




- Profile Settings
- Add to Suspicious List

=	FINDTAD				
Welcome hassan I		Name		Age	
\checkmark	Profile	Dress		Phone No	
۰.	Find	Upload Picture *only jpg or jpeg Upload Choose file	Browse	Missing Location	
IE	Suspicious				
IE	Police Station				
H	Logout	Save			

- Profile Settings
- Police Station



Chapter 5 System Implementation

This system is designed to be built on the .NET core framework that is very responsive and flexible to use. The decision as to which database is to be used, it must be done, however, because the data is shared or stored, the largest, most relevant information and knowledge management systems that will ensure an efficient operation.

5.1. Technologies and Tools:

ASP.NET CORE MVC

It is a free and open-source platform and is the successor to the ASP.NET developed by Microsoft. This is one of the modular structures as a function of both the fully and completely .NET Framework, on Windows, and cross-platform .NET Core.

Operating Systems:

Linux

It is the most popular and commonly used open-source operating system. Linux operating system is a program which runs all the other programs to access your computer through a request for these programs, and to communicate the request to the hardware of the computer.

Servers:

SQL server

It is a relational database management system developed by Microsoft. As a database server, its most important function is to store and retrieve related information upon request in other applications, you can either work on the same computer or on another computer on the network.

Tools:

Visual Studio Code

This is a source code editor created by Microsoft for Windows, Linux, and mac os. The features include a debugger, support for syntax highlighting, intelligent code completion, snippets, and code refactoring.

Adobe Illustrator

This is a professional design, vector, and drawing. As a part of the more timeconsuming process design, the Application allows you to create all the individual design elements. Designers use It for creating posters, signs, logos, designs, icons, etc.

Languages:

Front End:

HTML

This is the standard markup language designed for the web browser.

CSS

In this language, the format of the tables that are used to describe the position of a document written in a markup language like HTML. CSS is a cornerstone of the World Wide Web along with HTML and JavaScript.

BOOTSTRAP

This is a free and open-source CSS is a platform for the responsive, mobile, front-end web development. It contains CSS-and JavaScript-based design templates for typography, button, forms, navigation, and other elements of the user interface.

JAVASCRIPT

It is a programming language that is consistent with the ECMAScript specification. JavaScript is a high-level, often unpublished, as well as a multi-paradigm language. It features a dynamic type, the curly braces syntax, prototype-based object, guidelines, and for the first function.

Back End:

C#

It is a universal, multi-paradigm programming language that covers the static type, the serious, the lexically restricted, imperative, declarative, functional, generic, objectoriented, and component-oriented programming disciplines.

Database:

SQL

It is a domain-specific programming language used for managing data stored in a relational database management system, or flow rate, in order to process-relational information flow and management of the system.

Chapter 6 System Testing & Evaluation

6.1. Test Strategy

A model-based approach (this is a technique in which the test team picks and chooses from, existing or planned situations, and it creates a model of it, having regard to the inputs, outputs, processes, and behaviour).

6.2. Component Testing

Home:

			Selenium IDE - Component1*	- = 😣
Project: Component1*				
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				12:57:46
	Pi D D			
	inn-offiliu()	g an	Image: Image:	
	ted succ	essfully		

Signup:

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Project: findtad*) :
Executing *	ÞE	► 87 Ō.		Ø (1)	ec
SignUp*	https	//localhost:5001			Ŧ
		Command	Target	Value	
	18	mouse move at	id=PSQuestion	-1002.8333129882812, -432.1388854980469	1
	19	mouse up at	id=PSQuestion	-1002.8333129882812, -432.1388854980469	
	20	click	id≑PSQuestion		
	21	click	id=PSAnswer		. 1
	22	type	id=PSAnswer	11/11/1996	- 1
	23	click	css=#home .btnRegister		
	Comn	nand	• <i>II</i> [<u>]</u>		
	Targe				
	Value				
Runs: 1 Failures: 0	Descr	iption			
Log Reference	•				\bigcirc
17. mouseDownAt on id=PSQ	uestion w	th value -1002.8333129882812,-432.1388854	380469 OK	13:02	:45
		th value -1002.8333129882812,-432.13888549		13:02	
		value -1002.8333129882812,-432.1388854980	469 OK	13:02	
20. click on id=PSQuestion OF	K			13:02	
21. click on id=PSAnswer OK 22. type on id=PSAnswer with		11/1996 OK		13:02	
22. type on to=PSAnswer with 23. click on css=#home .btnRi				13.02	
'SignUp' completed success				13:02	_

Login:

			Selenium IDE - findtad*		- đ	8
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Project: findtad*						T
Executing ~	D≣	▼ Ö . ⊂°			Ø 🕕 🔤)
Login*	https:	/localhost:5001			Ψ	
		Command	Target	Value		
	14	type	id=LFPassword	erfvrfr	1.1	•
	15	click	css=#profile .row			
	16	click	css=.btnRegister:nth-child(3)			
	17	click	id=LPEmail			d
	18	type	id=LPEmail	asad98587@gmail.com		ų
	19	click	id=LPPassword			
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	Comn	and	• // []>			
	Targe					
	Value					
Runs: 1 Failures: 0	Descr	iption				
Log Reference					0	5
15. click on css=#profile .row C	W				13:00:41	
16. click on css=.btnRegister:n) OK			13:00:42	
17. click on id=LPEmail OK		,			13:00:42	
18. type on id=LPEmail with va	lue asad	98587@gmail.com OK			13:00:42	
19. click on id=LPPassword O	K				13:00:43	
20. type on id=LPPassword wi					13:00:43	
21. sendKeys on id=LPPasswo		alue \${KEY_ENTER} OK			13:00:43	
'Login' completed successfu	lly				13:00:44	v •

Parent Dashboard:

			Selenium IDE - ParentDashboard*		- a (<mark>8</mark>
"Selenium IDE" star	rted debu	gging this browser Cancel			
Project: ParentDashb	oard*				
Executing *	DE	▼ © ↓			Ø 🛙 👳
ParentDashboard*		://localhost:5001			٧
		Command	Target	Value	
	23	click	css=.swal2-confirm		•
	24	click	css=tr:nth-child(1) .btn-success > .fas		
	25	click	css=.swal2-cancel		
	26	click	css=.swal2-confirm		
	27	click	css=li:nth-child(4).title		
	28	click	css=tr:nth-child(1).btn		
	29	click	css=.swal2-confirm		1
	30	click	css=li:nth-child(5) .title		
	Comr	nand	• // [<u>></u>		
	Targe	t			
	Value				
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Runs: 1 Failures: 0	Desc	ription			
Log Referen	109				0
26. click on css=.swal2-cor					13:07:48
26. click on css=.swai2-cor 27. click on css=li:nth-child					13:07:48
28. click on css=tr:nth-child					13:07:49
29. Trying to find css=.swa		ок			13:07:49
30. click on css=li:nth-child	l(5) .title OK				13:07:50
'ParentDashboard' comp	leted succes	ssfully			13:07:50

6.3. Unit Testing

When a unit test is a test of the individual units or components to, for the purpose of unit testing is to make sure that each FindTad the unit is performing as expected. We have carried out unit testing in software development.

6.4. System Testing

		Selenium IDE - System Testing		- ē 😣
"Selenium IDE" st	arted debugging this browser Cancel			
Project: System Tes	sting			
Executing -	D≣ D 00 v			Ø 0 €
System Testing	https://localhost:5001			*
	Command	Target	Value	
	72 mouse over 73 mouse out	inkrexi=≻once Station		•
	74 mouse over	css=li:nth-child(5).title		
	75 mouse out	css=li:nth-child(5).title		1
	76 mouse over	linkText=Logout		
	77 click	linkText=Logout		
	Command	· // [2]		
	Target			
	Value			
Runs: 1 Failures: 0	Description			
Log Refer	ence			\otimes
73. mouseOut on linkTex	xt=Police Station OK			13:20:08
74. mouseOver on css=l				13:20:08
75. mouseOut on css=li: 76. mouseOver on linkTe				13:20:08 13:20:09
76. mouseOver on link le	-			13:20:09
'System Testing' comp				13:20:09

6.5. Test Cases

6.5.1. Test Case#1

User Registration

Test	Test	Test	Test case Description	Test Steps	Test Data	Expected Result	Status
Sceuerio	Scenerio	Case					
ID	Description	ID					
1	User	TC-01	Enter valid applicant	1.Enter Valid user	Fist Name,	Successful	Pass
	Registration		information	information 2.	last Name,		
				User clicks on	Country etc.		
				submit button			
2	User	TC-02	Enter invalid applicant	1.Enter invalid	Fist Name:	Error message Pop	Fail
	Registration		information	name	HassanI23	up saing 'Please	
				2. User clicks on		Enter valid Name'.	
				submit button			
3	User	TC-03	Enter invalid email	1.Enter invalid	Email:	Error message Pop	Fail
	Registration		address	email address	hassarrazakh	up saying 'User	
				2.User Clickk on	an@.123.	enter invalid email	
				Submit button		address'.	
4	User	TC-04	Enter valid email	I.Enter invalid	Email:	Pop up	Pass
	Registration		address	email address	hassanrazakh	notification saying	
				2.User Click on	an08@gmail.	'Confirmation	
				Submit button	com	email sent, Check	
						inbox.	

6.5.2. Test Case#2

Input Lost Child Record

Test	Test	Test	Test case Description	Test Steps	Test Data	Expected Result	Status
Sceuerio	Scenerio	Case					
ID	Description	ID					
1	Input Lost	TC-01	Enter valid child name	1.Enter Valid child	Fist Name,	Successful	Pass
	Child			name 2. User	last Name		
	Record			clicks on submit	etc.		
				button			
2	Input Lost	TC-02	Enter invalid child name	1.Enter invalid	Fist Name:	Error message Pop	Fail
	Child			name	HassanI23	up saing 'Please	
	Record			2. User clicks on		Enter valid Name'.	
				submit button			
3	Input Lost	TC-03	Enter invalid or blurry	1.Enter invalid	Image:	Error message Pop	Fail
	Child		image	image. 2.User	Invalid	up saying 'User	
	Record			Click on Submit	Image	enter invalid	
				button		image '.	
4	Input Lost	TC-04	Enter valid image	I.Enter valid email	Email:	Pop up	Pass
	Child			address 2.User	Valid Image	notification saying	
	Record			Click on Submit	_	'Image	
				button		successfully	
						upoaded'.	

6.5.3. Test Case#3

Test	Test	Test	Test case Description	Test Steps	Test Data	Expected Result	Status
Sceuerio	Scenerio	Case					
ID	Description	ID					
1	Search For a	TC-01	Enter valid image of	1.Enter Valid child	Image:	Successful and	Pass
	Lost Child		child	image 2. User	Valid Image	child record	
				clicks on submit		appear on screen.	
				button			
2	Search For a	TC-02	Enter invalid child	1.Enter invalid	Image:	Error message Pop	Fail
	Lost Child		image	child image	invalid	up saing 'Images	
				2. User clicks on	Image	do not match'.	
				submit button			
3	Search For a	TC-03	Enter image via live	1.Enter invalid	Image:	Error message Pop	Fail
	Lost Child		camera without camera	image. 2.User	Invalid	up saying 'Please	
			compatibilty	Click on Submit	Image	turn on camera '.	
				button			
4	Search For a	TC-04	Enter image via live	I.Enter valid image	Image:	Pop up	Pass
	Lost Child		camera with camera	2.User Click on	Valid Image	notification saying	
			compatibilty	Submit button		'Image	
						successfully	
						captured'.	

6.6. Results & Evaluation

We have done complete testing of our web application i.e., from unit testing to system testing. All the results are successfully passed by our system.

Chapter 7 Conclusion

7.1. Contributions

We developed a system that finds lost children in less time with accuracy and efficiency will surely assists parents. As earlier those thousands of children lost in our country every year, that is why our system will make impact in society and make eases for the people. Because if we as a nation continue with the old traditions despite of having online systems then we will surely face more problems in coming days.

7.2. Reflections

As every system has some strengths and shortcomings and its impact in society. Our system has following strengths; Our project is built on unique idea like we have not seen this type of systems in society yet. Our system stores huge amount of data and provide protection to data. Our system is user friendly even a person who has no know how of using web applications can be easily adoptable to the system. There are some weaknesses of system; our system is not connected to NADRA for verifying and validating data. Therefore, it is difficult for us to verify user data accurately. The impact of our system is very huge like before we have not a system that find lost children online. Therefore, our system will surely create a positive impact by assisting parents and society.

7.3. Future work

With the time we will maintain our system, the main work will do on system is to improve its user interface, we will make our system more efficient and accurate; for this we must connect our system to NADRA database. And many more features like searching techniques, authentication, and security of the data of the user will also improve with the time.

REFERENCES

[1] Artificial Intelligence. (2010, October 17). Expert Systems. Retrieved December 20, 2015, from Articles on Artificial Intelligence.

[2] Centre for Missing Children Kenya. (2015). Retrieved May 20, 2016, from Centre for Missing Children Kenya.

[3] Google. (n.d.). What is Person Finder? Retrieved November 20, 2015, from Person Finder.

[4] Nadu, T. (2011). Tracing missing persons remains a challenge. Coimbatore: The Hindu.

[5] Russell, S., & Norvig, P. (2013). Artificial Intelligence: A Modern Approach (3rd ed.). London: Prentice Hall.