DEVELOPMENT OF THE ELECTRONIC VEHICLE REGISTRATION SYSTEM IN IRAQ

For the master graduate qualification work of
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Introduction

This project includes the creation of a website and a program that solves the problem of vehicle registration in Iraq.

Relevance

❑ The Iraqis used to register their vehicles and transfer ownership by old retarded methods .

❑ Electronic vehicle registration system can reduce the number of employees working in the traffic department.

❑ Vehicle registration in the classic non-electronic system considered as waste of time and needed to make hard copies of the information of the buyer and the seller and the vehicle.

Goal and objectives

Purpose :

The purpose of the research is to design and develop websites that helps people to register their vehicles and transfer the ownership of the vehicle.

To achieve this goal, it is necessary to solve the following tasks:

1. Study analogue overview concerns the web design of vehicle registration.
2. Selecting the tools for developing website.
3. Formation of system requirements.
4. Website development.
5. Testing.

Overview of analogues

1. EVREG
2. UTAH (Division of Motor Vehicles)
3. AUTOREG

Feature	EVREG	UTAH DMV	AUTOREG
payment for online	Yes	Yes	Yes
Automatic Number Plate Recognition	No	Yes	No
Establishing and maintaining a reliable data base	Yes	Yes	Yes
Cost Rate	$ 21-30	$ 80-150	$ 60-72
country	Taraba territory	Utah State	Nigeria

Technologies and development tools

Selected MS SQL Server 2019 as databases .The database.

Selected as the programming language –C#

Used in web application – HTML Code and Css Styles using bootstrap

The device was used for barcode readers – wireless-bt4.0 Bar Code Gun 2D Barcode
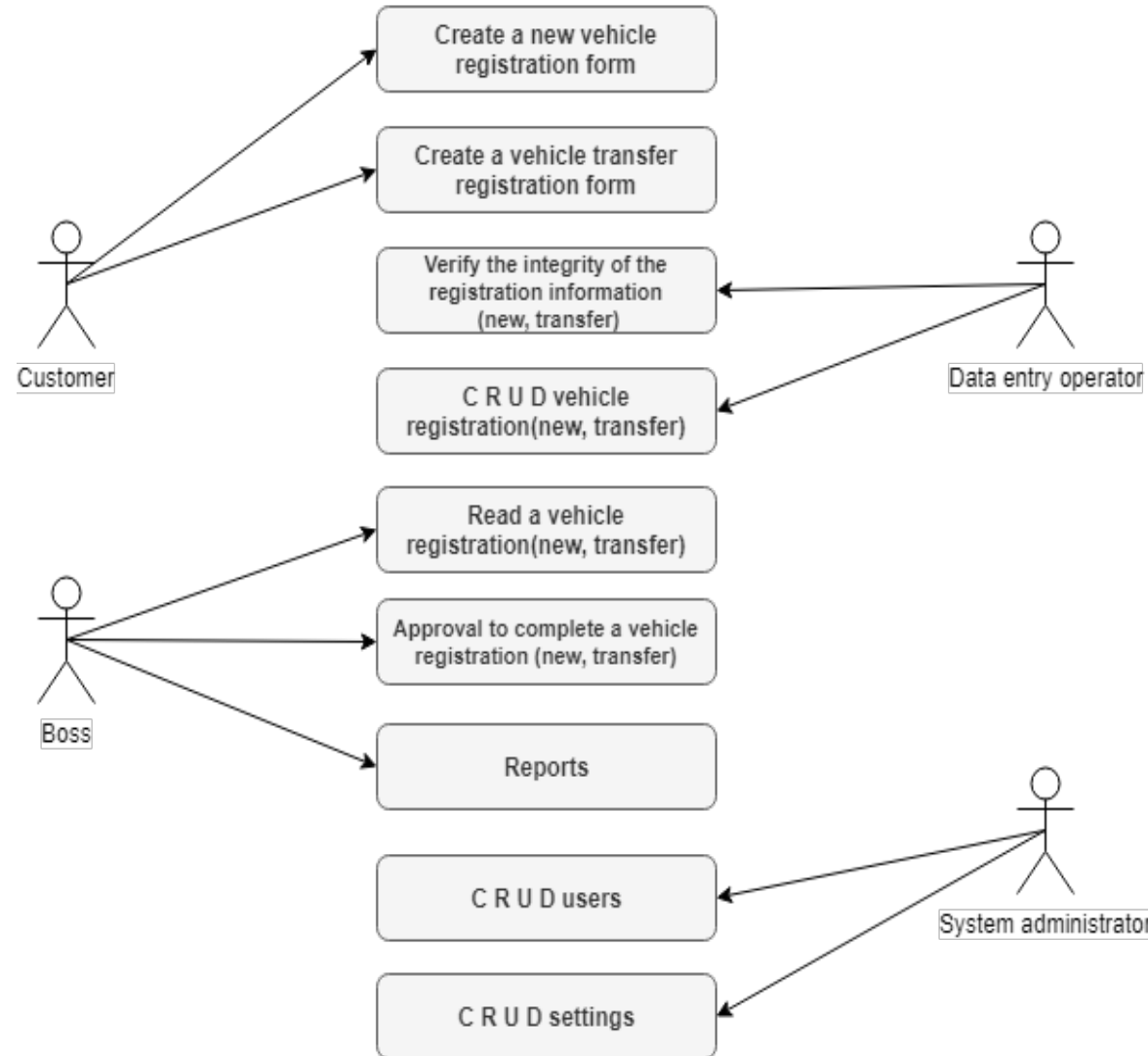
Definition of System Requirements

The following basic components are required to implement the project objectives:

- ❑ Filling the information of the vehicle on the website requires customer's authorization.
- ❑ Storing the customer's information in the database.
- ❑ Full control (Create , read , Update and delete) Vehicle information and customers .
- ❑ Full control (Create , read , Update and delete) user.
- ❑ Print registration information reports.
- ❑ Ability of Searching for old vehicle registration information.
- ❑ Add information of the vehicle and customers by QR-code.

Usage Diagram Vehicle Registration System Cases

System modules:
- Boss
- Data entry operator
- System administrator
- Customer

(CRUD)
create, read, update, and delete

Definition of non-functional system requirements

❑ For the convenience of the website user, it need to develop an interface even a non-experienced user can deal and make use it.

❑ The program must contain information such as the customer's photo, place of residence, type of vehicle, color, and chassis number, etc.

❑ The duty of the Boss is very important in verifying the information of vehicles and customers to give the final approval on the registration of vehicle.

Tables and relationships diagram
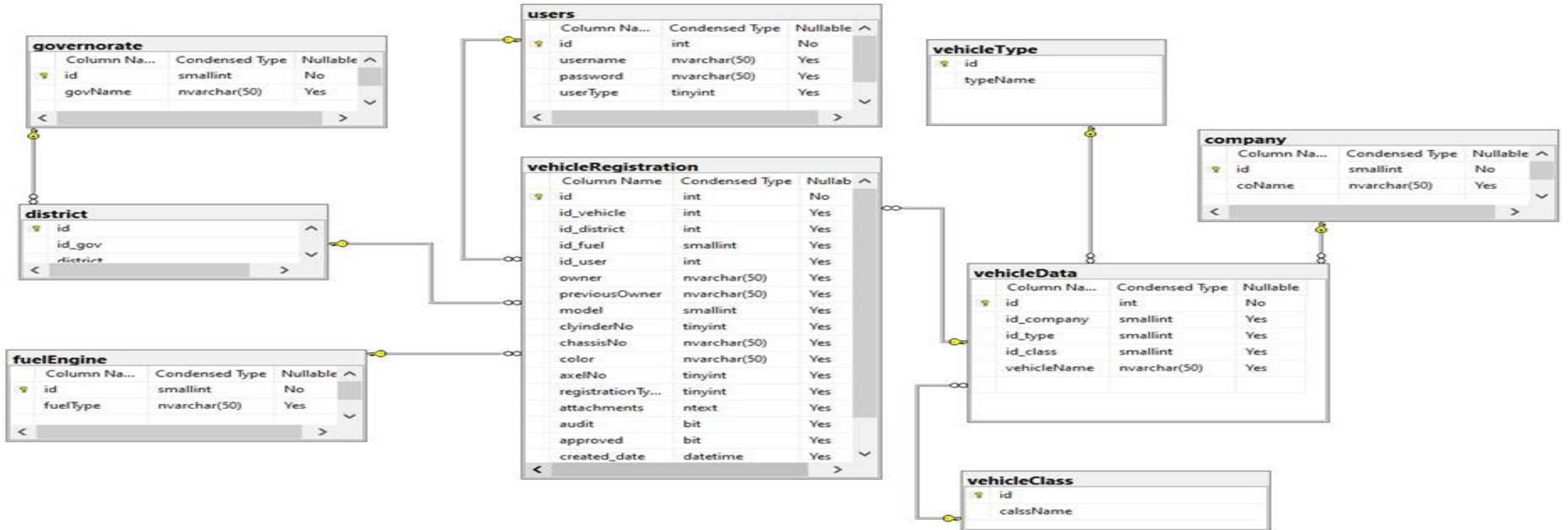
Development The website

Results

Form of Vehicle transfer

Owner:	anas qays	Previus owner:	mohammad safaa
District:	Al-Zafraniya		
Chassis No.:	las19811881av		
Vehicle mark:	Sonata	Model:	1980
Cylinder No.:	4	Axel No.:	2
Fuel type:	Gasoline	Color:	white
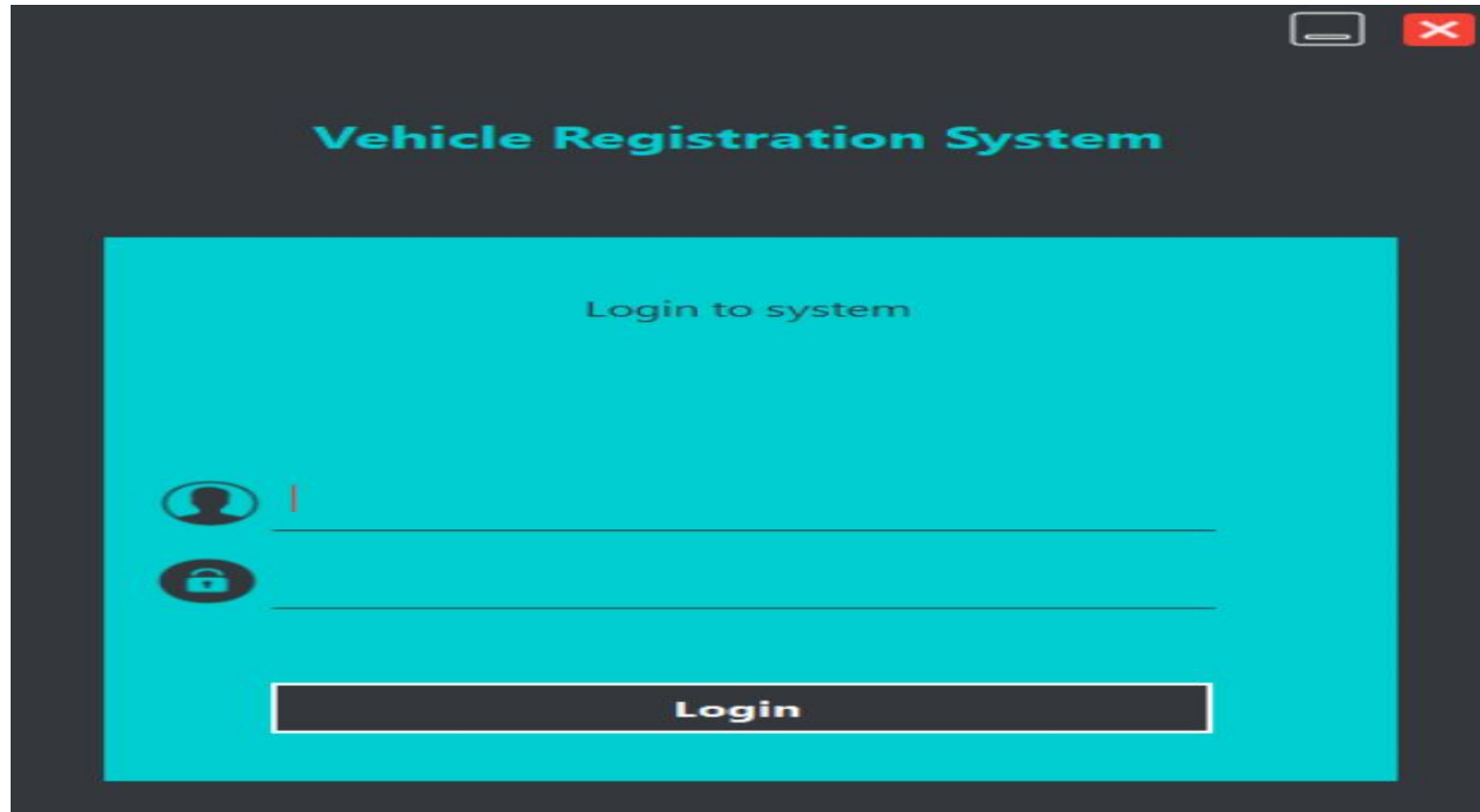
Login sample

1.Data entry operator
2. System administrator
3.Boss

1. Vehicle Registration System Development

Data Entry information by QR-code

Search for a registered vehicle

2.Modify registered user and add a new user

Add state and district (adress)

3. Vehicle registration approval

Registration report

Report registration status

Vehicle registration system — Report of registration status

Total: 19 | Audited: 7 | Unaudited: 12 | Approved: 7 | Unapproved: 12

No	Owner	Vehicle Name	Company Name	Clyinder No.	Axel No.	Model	Chassis No.	Fuel Type	Audit	Approved
1	mohammad	Sorrento	Kia	2	2	2007	dfdfff432d2	Diesel		
2	baha	Nero	Kia	4	2	2016	rwfv	Biodiesel		
3	anor	Sonata	Hyundai	4	4	2014	rwfv1	Biodiesel		
4	olka	Sonata	Hyundai	2	2	2013	n3223	Gasoline		
5	jasam	Nero	Kia	6	4	2008	rwfv246	Gasoline		
6	samar	Sorrento	Kia	1	1	2018	dfe1	Gasoline		
7	shahad	Sonata	Hyundai	2	2	2003	cxhuih6554	Biodiesel		
8	mohammad ali	Sonata	Hyundai	4	4	2019	ch123456	Gasoline		
9	Yasser	Sonata	Hyundai	2	4	2021	wd2eef4v	Gasoline		
10	anas	Sorrento	Kia	4	6	1980	las19811881av	Gasoline		
11	omer	Sorrento	Kia	4	2	2003	xdvzdgegd	Ethanol		
12	jafer	Sonata	Hyundai	4	2	2016	rwfv767	Biodiesel	False	False
13	omer	Sonata	Hyundai	4	2	2003	rwfv	Biodiesel	True	True
14	karar	Sonata	Hyundai	2	2	2020	cwcwd2	Biodiesel	True	True
15	ali	Sorrento	Kia	4	6	2008	1212	Gasoline	True	True
16	ali mohammad	Nero	Kia	2	2	2007	1212	Biodiesel	True	True
17	hussan	Sorrento	Kia	4	2	2010	wwnw3mnt	Diesel	True	True
18	marwan	Sorrento	Kia	4	2	2017	wdb76u373	Gasoline	True	True
19	flayhh	Sonata	Hyundai	4	4	1991	bejfe6r63r7	Gasoline	True	True

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Report registration type

Vehicle registration system — Report of registration type

Total: 19 | Vehicle registeration: 6 | Vehicle transfer: 13

No	Owner	Vehicle Name	Company Name	Clyinder No.	Axel No.	Model	Chassis No.	Fuel Type	Registration type
1	ali	Sorrento	Kia	4	6	2008	1212	Gasoline	Vehicle registeration
2	anor	Sonata	Hyundai	4	4	2014	rwfv1	Biodiesel	Vehicle registeration
3	olka	Sonata	Hyundai	2	2	2013	n3223	Gasoline	Vehicle registeration
4	hussan	Sorrento	Kia	4	2	2010	wwnw3mnt	Diesel	Vehicle registeration
5	Yasser	Sonata	Hyundai	2	4	2021	wd2eef4v	Gasoline	Vehicle registeration
6	omer	Sorrento	Kia	4	2	2003	xdvzdgegd	Ethanol	Vehicle registeration
7	anas	Sorrento	Kia	4	6	1980	las19811881av	Gasoline	Vehicle transfer
8	marwan	Sorrento	Kia	4	2	2017	wdb76u373	Gasoline	Vehicle transfer
9	flayhh	Sonata	Hyundai	4	4	1991	bejfe6r63r7	Gasoline	Vehicle transfer
10	jasam	Nero	Kia	6	4	2008	rwfv246	Gasoline	Vehicle transfer
11	samar	Sorrento	Kia	1	1	2018	dfe1	Gasoline	Vehicle transfer
12	shahad	Sonata	Hyundai	2	2	2003	cxhuih6554	Biodiesel	Vehicle transfer
13	ali mohammad	Nero	Kia	2	2	2007	1212	Biodiesel	Vehicle transfer
14	mohammad ali	Sonata	Hyundai	4	4	2019	ch123456	Gasoline	Vehicle transfer
15	jafer	Sonata	Hyundai	4	2	2016	rwfv767	Biodiesel	Vehicle transfer
16	baha	Nero	Kia	4	2	2016	rwfv	Biodiesel	Vehicle transfer
17	omer	Sonata	Hyundai	4	2	2003	rwfv	Biodiesel	Vehicle transfer
18	mohammad	Sorrento	Kia	2	2	2007	dfdfff432d2	Diesel	Vehicle transfer
19	karar	Sonata	Hyundai	2	2	2020	cwcwd2	Biodiesel	Vehicle transfer

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Testing

	Enter Data	Expected result	Result obtained
Vehicle Registration through the website	The customer creates a process of registration or transfer of ownership of the vehicle	a special information barcode will appear	The test was successfully passed
Add a new user	System Administrator in the main menu	clicks the Settings button and can add, modify and delete the user	The test was successfully passed
Search for a Vehicle Registration	Data entry operator in the main menu	clicks system on the search button, writes a number Chassis No	The test was successfully passed
Approved and reviewed to Vehicle Registration	Boss in the main menu	click on the approved and reviewed button and the approval will approved and reviewed	The test was successfully passed
Add information by barcode	Data entry operator in the main menu	the system user clicks the qr code Button, and writes the barcode	The test was successfully passed
Exit from the program	The user is in the main menu	the system user clicks the exit button of the program, and Closes	The test was successfully passed

Conclusions

The problem of vehicle registration in Iraq was studied and this problem was solved.

This project promises to solve the problem current vehicle registration and replace it with a modern electronic web-based registration system.

Thanks for your attention.