

# Web based Tracking Process Progression System for Kurdish Governmental Documentation

Sarkar Hasan Ahmed

M.Sc. Computer Science  
Sulaimani Polytechnic University  
Iraq-KRG Sulamanyah

Miran Hikmat Mohammed Baban

M.Sc. Computer Science  
University of Sulaimani  
Iraq-KRG Sulamanyah

## ABSTRACT

These days, the governmental offices in Kurdistan regional government (KRG) are not electronic. Therefore, they are asking for much official paper documentation and visiting offices too many times from people who are visiting there regularly to check process progression. Also, applicants sometimes required to bring numerous amounts of official documents. Thus, this old system is time-consuming and costing a bunch of pocket money for transactions among different locations.

In this research, a new system approach is proposed to solve this issue among various governmental agencies, which is providing a complete idea that gives the ability to track and offers pre-requirement documents for each application.

By using this system, the applicant will get full knowledge about their documentation process progression and know all the requirements for their visiting in person to those governmental offices. Moreover, individuals who have applied for those agencies, will save time and pocket money as well as be comfortable mentally.

## Keywords

Online system, Kurdistan Regional Government, documentation process, process progression, government offices

## 1. INTRODUCTION

All the systems that relate to the official document process have the same routine in every official agency with different in application sequence steps. Regular means visiting official agencies frequently to check the status of the progress of the applications that are applied to verify the process to which level is reached and which obstacles does the process face. Also, another fact about this phenomenon is that these offices ask for many papers and official documents from the applicants.

Let us take citizen and identification card as an example, In this process, employees that work in this organization demand some specific amount of official document papers. For example, parent identity card, legalization documents, and Location insurance card. These requirements are for getting the identification card that every person who belongs to the

country must get it. However, this process may take the amount of time for finishing the process and finalizing checking documents and proper steps.

Another example that related to our work, and we chose it as the main idea for our case study is General Directorate of Passport in Sulaimani. The reason for choosing this office as a case study is simplicity and clearance in the process, which means applicants do not get lots of obstacles during application processes. The primary requirement of this process is that everyone who applies for this center must have

some official documents for instance identification cards, national food form. We have indicated all key aspects of this example in the case study section.

Like all the governmental organization, there are many people apply for their required tasks every day, so this amount of people will make the place crowd. This group made by applicants, most of them visits these locations to check if their application either finished or require additional progress. Whereas, this can be solved by our new proposed system, which people can check their documentation progress via online from a distance, for instance, access the system through smartphones or computers. In more details, we have discussed this idea with many examples in the result and discussion section.

In our proposed system, that solve the governmental applicants' issues, we came into account that we need some requirements software. Moreover, hardware based on some other studies that we have discussed in more details in the related work section.

## Software

- Windows
- Visual Studio 2012
- SQL Server database
- StarUML
- Linux operating system
- Web server

## Hardware

- Server
- Personal Computer
- Internet access
- Public IP address
- A training course is necessary for staffs in the offices that use our system to introduce the ability and the way of working it.

This research paper is organized into the following sections:

1. Introduction
2. Background research
3. Related work
4. Proposed system and case study
5. System Design

- 6. Result and discussion
- 7. Conclusion and future work
- 8. References

## 2. BACKGROUND AND RESEARCH

The title of our paper is related to E-Government, and it is comprising many subjects. The most related topics of E-Government that related to our work are eService, E-Administration, and tracking process progression for documents electronically.

According to (Valentine, 2004), E-Government is defined as E-Government is simply a way to provide different electronic services for various people such as providing a website that people can engage with it for performing their personal purposes electronically and systematically. Also, these web pages contain information about governmental policies.

According to Abramson and means, 2001, E-Government is a way to make a bridge between government and public exchange information and transaction.

In addition, E-Government comprises four main categories:

- government-to-citizen (G2C)
- government-to-employee (G2E)
- government-to-government (G2G)
- government-to-business (G2B)

This research chose one of the categories for discussion among the others, which is government-to-citizen (G2C). This type means there is a relation between government and public in a dynamic approach. For example Tracking Process Progression for documentation.

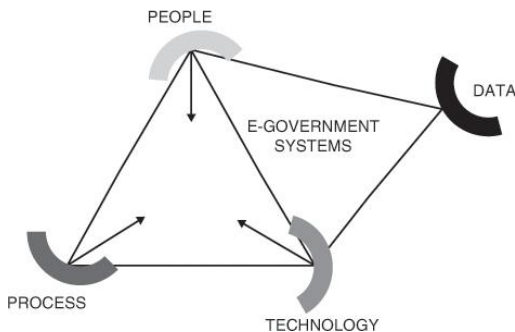


Fig 1: Government-to-citizen (G2C) (Kettani, 2014)

There is another electronic service that engages people with different facilities via online, and it is called eService. This service means providing electronic access for people to interact with systems that they need. A user interface is required for having eService, and it is usually a web-based application.



Fig 2: User interface in eService

## 3. RELATED WORK

There is much generic software for tracking progression process purpose; Lotus Email system is one of them (Irfan Ayub, 2010). One of the Lotus's features is having the ability to monitor process progress of files from the start point to the final state. It can be used to control data by applicants and also, getting different kinds of reports by administrators according to necessary information of the documents, initiator, at desk, date, department, and closed status. One the other hand, the result of our research is a custom software that specially designed and programmed for Passport directory of Sulaimani in the Kurdish Language. Our software is ease to use due to simplicity and easy to use. Our system will automatically generate an ID number of each application, and this identifier can be utilized as a key to finding the status of the application. Another benefit of our system is that the system can be connected to other software in the office, and it can be developed to do further work and having more services.

### 3.1 Proposed System

In this work, we have designed and implemented a web-based software for tracking documentation process and showing pre-requirement official documents for each kind of applications. In the following we are going to show the steps and the way for solving the issue of our new investigated system.

### 3.2 Proposed System and Case Study

In the case study we have concluded that the process goes through three processes:

Step 1 Visiting website: the applicant visits the website of the office and checks the exact pre-requirement official documents for this kind of applications. Also, the website will be given to everyone who will apply for documentation process.

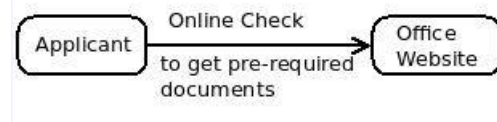


Fig 3. Phase 1 – Online check

Step 2 Visiting in person: the applicant brings the required official documents and visit the office in person and then finally apply for the application. Also, the position will give id number of implementation.

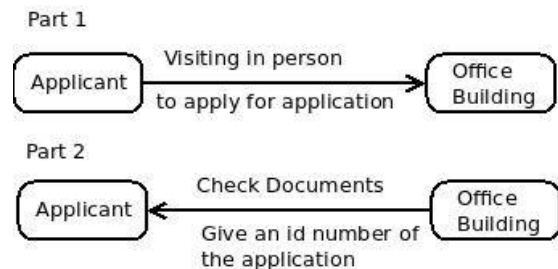


Fig 4. Phase2 – In-Person Visit

Step 3 Visiting website: the applicant checks the website frequently instead of visiting in person, to verify the status of process progression.

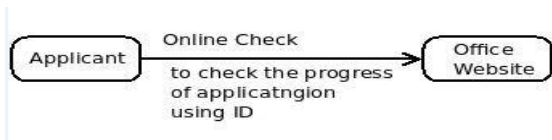


Fig 5. Phase3 – Online check

Step 4 visiting in person: when the applicant knows that process reached its final destination, it is time to visit the office in person to collect the results.

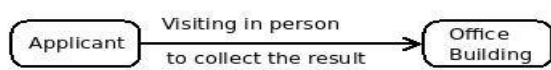


Fig 6. Phase4 – Visit in Person

## 4. SYSTEM DESIGN

In this section, we talk about the steps to develop the proposed system that starts with collecting requirements and analyzing them based on software development aspects. Moreover, discuss the following diagrams that clarify our idea for our research.

### 4.1 Use Case Diagram

Names of the system: Online Process Progression Tracker.

#### Actors:

1. Applicants: is a person who requests for documentation process application.
2. Officer: is an individual who updates the status of the clients' applications.
3. Admin: is a person who manages the website who update the pre-requirements documents on the website.

#### Use cases of the system:

1. Check pre-requirements: is used by applicants to get pre-requirements for a particular application
2. Generate ID of applications: the system will generate an identification number for each clients' application.
3. Check progression process status: is used by applicants, to know the state of the process sequence of process progression of the form.
4. Update process progress status: is utilized to update the state of requests.
5. Generate reports: is used website administrator to retrieve statistics of implementation and the progression application.
6. Update pre-requirements: is employed by the administrator of the website to release and update pre-requirements, needed official papers and conditions for each kind of implementation.

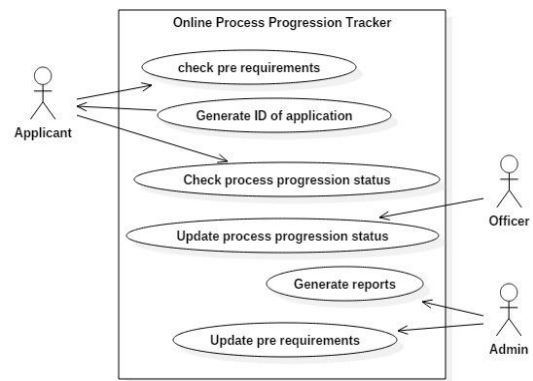


Fig 7. Phase4 – Visit in Person

### 4.2 Sequence Diagram (Interaction Diagram)

Our proposed system has two functionalities for each scenario, which are the following phases.

The first scenario, applicant check for pre-requirements: before the candidate visits the office in person, he/she, should verify the website to know pre-requirements documents and conditions for the application.

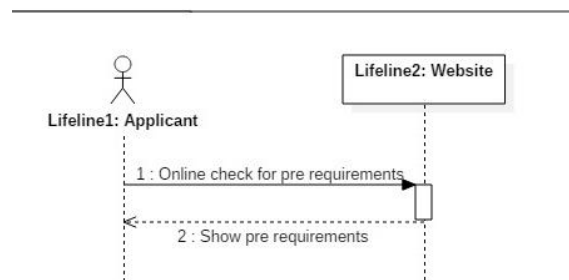


Fig 8. Sequence Diagram Part 1

The second scenario, applicant visit the website to know the process progression state of the application by using the id number of it.

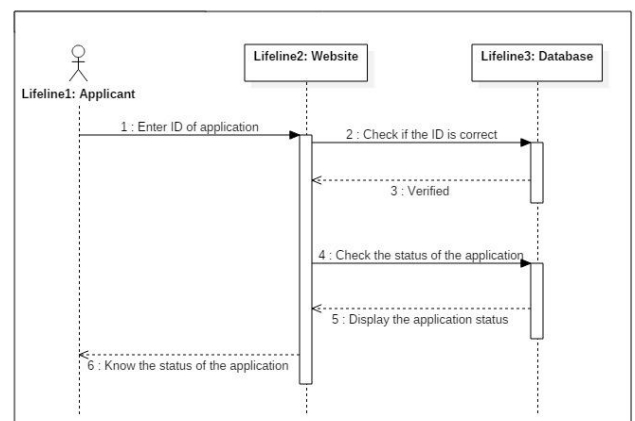


Fig 9. Sequence Diagram Part2

## 5. RESULT AND DISCUSSION

In our research, after we create the main idea of our system, it gives us an open door for some outcomes. One of the most important points among the results is tracking process progression of applications. And the other aspect is knowing pre-requirement official document papers for each type of applications. These processes are the part of our proposed system that helps the applicant to track their applications that are held by the government agencies. Therefore, clients for a particular application can save money and time.

By saving money means that the applicants with this system will less spend an enormous amount of pocket money for a transaction between different locations.

By saving time, says that the quantity of time that spend for tracking the documents in person will take many hours plus the time of travel from their location to the offices. Also, some applicant may come from the distant location, and sometimes their working paper has not been finished, and sometimes they need to go back to bring additional official documents. So they need to back to their home and come back again. Thus, if there is a system like we proposed, exist among the other agencies it will make the all the process to be finalized in an easy way. All the process are done with this system only with given ID number of the applications to their applicant.

## 6. CONCLUSION

To sum up, the most of the governmental agencies has shortage with systems. One of the most critical systems is that an essential one among people is the online tracking system. With this system, people will have more confidential to apply to government agencies, and they can be sure of their process application with guarantees. Also, the two most important thing that people mostly ask for, time and cost, they can warrant them in more efficient way.

## 7. FUTURE WORK

So far, we have indicated some important points to propose a new system for Kurdistan Governmental Agencies System, which is Online Tracking Process Progressing for documents, and we have a plan to produce an additional idea that progress this current system with the following criteria:

- Our work is a chunk of E-Government and for people who are doing their work on converting all the existing system to electronic system.
- We are going to add other criteria such as notifying people for their process progression via email and SMS.

- We can omit the step that is named visiting in person to electronic tour via online submission.

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