

Application of electronic archiving in government.

A proposed system in the Department of Institutions Personal Cards-Benghazi

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Abstract:

In the present time, the world is witnessing significant developments in providing the opportunity for public and private administrative government institutions to use information technology in the performance of their administrative work because they accomplish work with great accuracy and speed, and also the ease of communication with departments within the institution using various means of communication-based on computers and networks. In this paper, we dealt with the study of developing an electronic system based on building a database for archiving data, which is the basis for working within government institutions, This system transforms documents, manual processes and their attachments into operations and compositions within electronic records that are indexed sequentially according to the sequence number and reference number of the document and saved in the database for archiving, The research relied on designing an electronic system in the ID cards department of Benghazi to archive the department's data in terms of incoming and outgoing correspondences to the department and save them in a database, The most important findings of the research is the importance of archiving data in an electronic form and protecting it from the risks that have occurred, for example, document corruption and illumination as a result of the destruction of the main building of the

passports in Benghazi. Where an electronic system has been designed that helps in archiving and flexibly documenting data according to the developments and changes that occur in the work.

الملخص:

في وقتنا الحالي يشهد العالم تطورات كبيرة في إتاحة الفرصة أمام المؤسسات الحكومية الإدارية العامة والخاصة باستخدام تقنية تكنولوجيا المعلومات في أداء عمله الإداري لأنها تتجز الأعمال بدقة وسرعة كبيرة، وايضا سهولة التواصل مع الإدارات داخل المؤسسة ذلك باستخدام وسائل الاتصال المختلفة بالاعتماد على اجهزة الحاسوب والشبكات. وفي هذه الورقة فقد تناولنا دراسة تطوير نظام الالكتروني معتمد في عمله على بناء قاعدة بيانات لأرشفة البيانات والتي تعد الأساس بالعمل داخل مؤسسات الحكومية. حيث يعمل هذا النظام على تحويل الوثائق والعمليات اليدوية ومرفقاتها إلى عمليات ووثائق ضمن سجلات إلكترونية يتم فهرستها بشكل متسلسل على حسب رقم التسلسل والرقم الاشاري الوثيقة وحفظها في قاعدة البيانات لأرشفتها، وقد أعتد البحث على تصميم نظام إلكتروني في قسم البطاقات الشخصية بنغازي لأرشفة بيانات القسم من حيث مراسلات الصادرة والواردة للقسم وحفظها في قاعدة بيانات.

وإن أهم نتائج التي توصل إليه البحث هو أهمية أرشفة البيانات بشكل إلكتروني وحمايتها من المخاطر التي قد حدثت مثلا تلف الوثائق وضياعها نتيجة دمار المبني الرئيسي للجوازات بنغازي. حيث تم تصميم نظام الإللكتروني الذي يساعد في أرشفة البيانات وتوثيقها بشكل قابل للتعديل وفق التطورات والتغيرات التي تحدث على العمل.

Keywords: Archiving, electronic archiving, electronic archiving.

Introduction:

Information technology has become an essential role in various fields, which led to the need for digital transformation in work within government institutions, where new technologies and concepts are used in archiving, preserving and storing documents within databases, which facilitates the search and retrieval process. This led to the use of the idea of electronic archiving. Through the electronic archiving process, paper documents of all kinds and

statuses are converted into electronic records that are easy to retrieve and deal with electronically, saving effort and time, and protecting data and documents from damage and loss, The electronic archiving technology also helps provide the necessary statistics and reports very quickly in front of decision makers to make decisions and draw appropriate plans at the right time, And that the process of switching to electronic archives has become a necessary process and the task of developing the administrative process within institutions to advance the provision of various services within them [1].

Research problem:

The increasing and continuous increase and stagnation in documents, documents and transactions, which are among the most important resources owned by government institutions, as a result of the desire of these institutions to keep pace with scientific and technological development in providing a mechanism that works to preserve all sources of information in its various forms and organize them in a way that saves effort and time in the process easy and easy retrieval, Using electronic archiving systems, through which all paper documents of all kinds are converted into electronic documents in order to manage documents automatically and get rid of the paper system and from those institutions is the Department of the ID cards department at the Passports and Nationality Department, Benghazi, where the department seeks to organize and preserve all documents and documents for it in a manner that ensures their safety from damage and loss, maintaining the confidentiality of the information it contains, and providing the opportunity for employees in accordance with the regulations and regulations approved in the Cards Department, using technology and information systems, where the electronic archiving system was used to perform this task.

The importance of the research:

The importance of the research lies in focusing on the development of work within the Benghazi Personal Cards Department, using information and communication technology to enable building an information base that facilitates the archiving of all incoming and

outgoing transactions of the department electronically within records that are indexed by placing a special code for you for a document or file, which facilitates access to it with minimal effort time.

Research goal:

The research aims for the following:

- 1 - The use of information and communication technology in the ID cards department, Benghazi.
- 2 - The importance of information and communication technology in the ID cards section in terms of quick access to documents and documents with ease, protecting them from damage and loss, and providing places to save these transactions.

Research hypothesis:

The research depends on the defining aspect of the theoretical part, and the design of an electronic system to create a database for the ID section in the Department of Passports and Nationality Benghazi and the ease of archiving them electronically.

Literature review:

When we studied the subject of electronic archiving, we found many programs and systems based on archiving and electronic archives that have been developed to serve current and future situations. The integrated automatic filing system is characterized by using the latest devices, scanning machines, electronic archiving systems and the central database; which makes it easier for institutions of all sizes and activities to access it. These modern systems help employees or users to know the content of documents and help them access them [2]. Among these systems are the following:

Aljoud system for electronic archiving:

It is an electronic archiving system that helps employees within institutions to archive the data of official books issued and received from and to those institutions, where through a system we can create tables for the data of issued and incoming books as well as the name of the recipient with the ability to save and attach copies of those books as attachments with those data, and it is also possible By

creating a barcode for each official book, as well as generating a QR for each official book, this system works on all scanner devices, whatever their types and sizes, and the data stored inside it can also be printed on different types of printers and in different formats and reports structures. Various permissions can be given to users to provide privacy for each user working on the system.

A system that archives all documents and documents electronically and works to convert documents of all kinds and in different formats and extensions (such as (JPG, TIF, PDF and all audio extensions). And images into electronic documents that are stored and archived within the computer system and within a special tab of the program, and those archived documents can be retrieved, displayed, browsed and modified with ease and ease[3].

(Al Amoudi 2010)

The researcher has developed an automated system for managing the laboratories of the Department of Psychology at King Abdul-Aziz University in the Kingdom of Saudi Arabia, where the system keeps tools, tests, standards and paper forms in the form of documents and electronic files in order to reduce paper documents and help to save space used to save papers and convert all manual and paperwork into tasks Electronic with quality assurance and continuous calendar. The system also provides other works for students of the Department of Psychology, such as borrowing, searching, and electronic browsing, as the system provides for each tool, device or test a number of its own, which serves as the link by which it is known and indicates its whereabouts [4].

(Al-Qathami 2021)

She studied the laser fiche archive system, which is used at Umm Al-Qura University in the Kingdom of Saudi Arabia to preserve the archives. It is an automated system that does not provide archiving that helps to perform the functions of preservation, search for documents and retrieval of documents faster and easier. Where the system retrieves the document in several different ways by searching, by knowing any information from the document such as (its number, date or one of the subject words, the file it is registered with, one of the keywords, one of the names contained in it, the addressee or the recipient from..etc. (And then it is displayed with

all its data on the screen, and once the document data is displayed, any other operation such as printing or sending to another body or user within the institution can be performed [5].

Theoretical framework for research:

Data archiving:-

Electronic archiving is not, as some think, a transition from traditional to electronic archiving by introducing technology only to it, but rather it is a development in the concept, practices, procedures, means and legislative systems[6].

Definition of electronic archiving: as defined by the Arab Information Club: it is the scanning of documents, processing and storing them in electronic media, and linking these media to the index database, allowing direct exhaustion from the index to the image of the document directly [7].

And where the idea of the electronic archive is based on the possibility of scanning documents with a scanner that differs in different paper sizes and then compressing them to be stored in less space after that they are saved in large-capacity storage units and with the least retrieval time (Arabioter: 1995 m) [8].

And the archive was defined by (Bossemgon, 2009) as a set of documents resulting from the practice of different works and activities for any organization, administrative unit, or institution, whether it is of an educational, administrative or financial nature.

It includes a set of information and data that may differ in terms of date, importance, type, value, and whether these documents were completed by it and it is required to be preserved so that it can be easily referenced [9].

The archive has been defined as all written documents and papers produced during activities, whether collective or individual, provided that they are organized in a way that is easy to return to when needed. ([4] Al-Amoudi, 2010)

The capabilities that characterize the electronic archiving system include:

- 1- Picking up an electronic copy of standard paper documents of international sizes, starting from (A0 to A5).
- 2- Storage of photos or documents.

- 3- A very fast search and retrieval of the saved images of documents.
- 4- View the documents saved in the system repository.
- 5- Organizing documents and linking them to the indexing system automatically according to special fields.
- 6 - Multiple means of entry and exit according to the beneficiary's desire.
- 7- Obtaining all kinds of reports and statistics in very simplified ways. [6]

Advantages of data archiving:

The electronic archiving of documents is characterized by a set of advantages as follows: (Al Hosh 40, 2018)

- 1- The possibility of categorizing data in a flexible manner and electronically.
- 2- Share data between its users.
- 3 - Protect data from loss and damage.
- 4- Saving time and effort in accessing data.
- 5- Ease of retrieval to make the necessary and required modifications. [10]

Strategic goals of electronic archiving:

- 1- Save effort and money.
- 2- Saving time by smoothly exchanging documents electronically between different institutions and in different geographical areas in the easiest and fastest way.
- 3- Helping management and decision-makers to take the right decisions based on correct and up-to-date information.
- 4- Access to management without papers.
- 5- The path towards e-government.[11]

The practical side:

Electronic archiving is one of the important works in the Passports and Nationality Benghazi Department in general and the ID Cards Section in particular because the electronic archive for all departments in the Department is a very important process, especially after the Passports and Nationality Department was targeted and bombarded directly, which led to the destruction of the

building and the exposure of paper documents to loss and damage. Loss, theft and fire and with the continuous increase in the volume of paper information in all government departments called for the necessity to use the electronic archiving system because of its benefits that are reflected in the work in a positive and civilized manner, through which we can create an information database that includes all archived electronic information using electronic indexing programs and the possibility of searching For files, recalling them, and quickly and direct retrieval of any document or document in an easy and smooth way for employees and reduces the effort and time it takes while searching for the required document or information. The proposed electronic system in the identity cards section of the Passports and Nationality Department, Benghazi:

By reviewing the work within the identity cards department at the Passports and Nationality Department of Benghazi, it was noted that this department relies on the paper-based system in storing transactions within the department. Accordingly, we have proposed the design of an electronic system that depends on its work on a database for that in order to introduce technology and technology within the department and to keep pace with the scientific and technical development in the field of computers and networks, as well as in order to facilitate work within the department, as this system includes knowledge of incoming and outgoing transactions from the department with a database Which makes it easier to work with the system, to access the document with ease and ease.

There are many electronic archiving systems, depending on the nature of work within the institution, but they all share in solving the problem of paper archiving of documents, and address work needs, which can be summarized in the following points:

- o Designing and building a powerful, fast, multi-user electronic system equipped with the latest technologies for information safety and security.
- o Providing a simple and clear application interface for system users.
- o Ease of information management.
- o Organize records and documents well so that all users and authorized employees can benefit from them.

o Developing and digitizing work procedures[11].

Each paragraph of the designed system will be described as follows:

Here the system diagrams are drawn using Activity Diagramming:

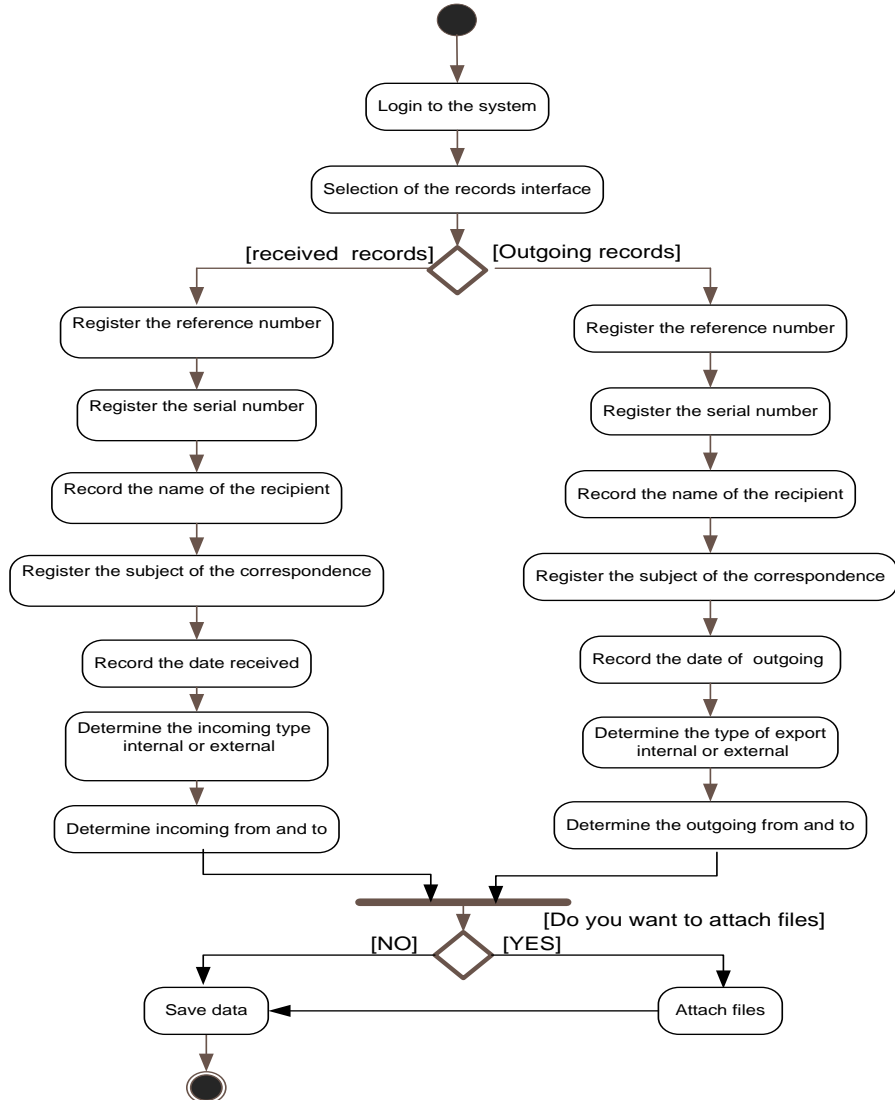


Figure 1. Electronic archiving system

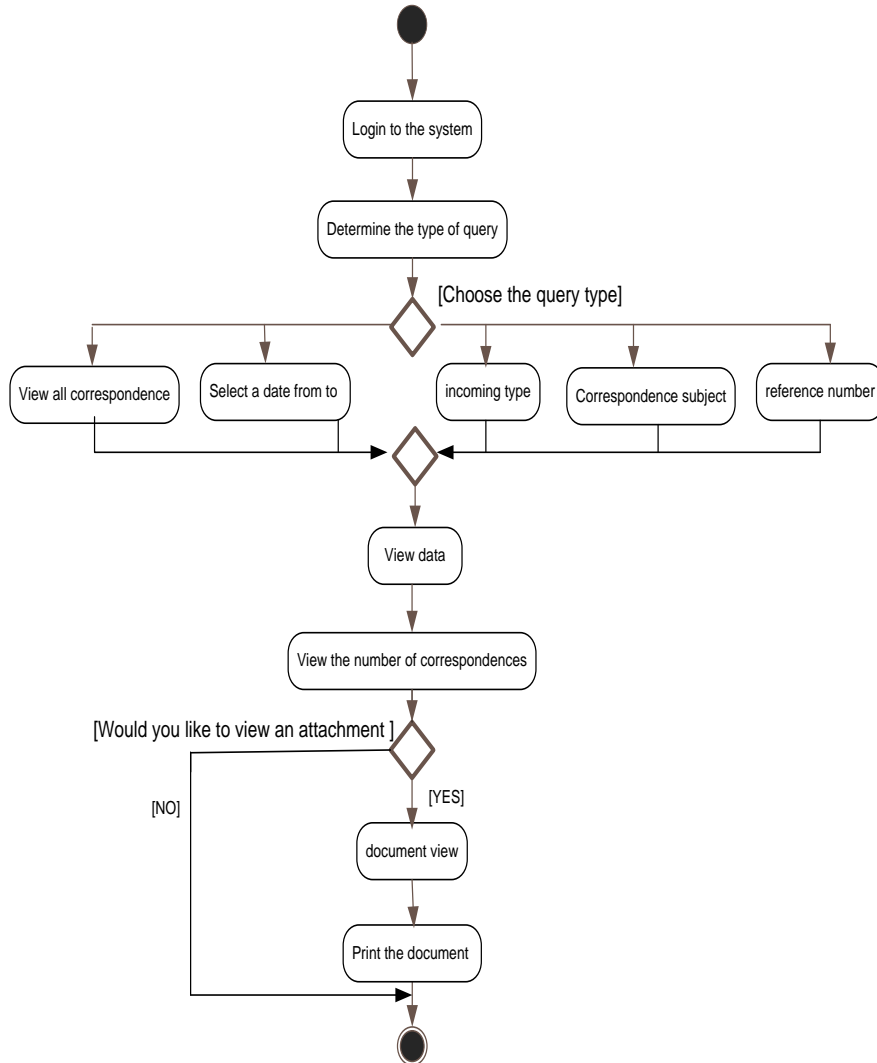


Figure 2. Query Electronic archiving system

The process of electronic archiving is to convert paper documents into electronic files, where records are archived in PDF format within our system because the PDF file format is characterized by high security and sobriety in terms of difficulty forgery and manipulation compared to digital image files, where the file can be

viewed, browsed and numbered without changing its information. Also, files with the PDF extension have a small storage capacity compared to if they were stored as digital images, and their high ability to accommodate paper documents of multiple pages up to thousands, and means the comprehensiveness of documenting the paper file within one electronic file. This feature cannot be achieved by file formats with digital images [12].

The system stores a PDF file inside a field in the database as a BinaryData type, where this process was done within the system using a software code in order to make the data more secure so that if the database file were entered and displayed, it would not be known that this field contains a file or document of type PDF in order to be able to know the data inside the fields, as for the rest of the other fields of the data inside the database, we encrypt them by encrypting the data of the fields through the Encrypt columns command from within the SQL program, and we also specify the type of data encryption, which is the type of random encryption, in order to provide more protection for the data.

Also, to protect the data, we create a password for the database, and the system automatically backs up the database and saves it in an external source in order to provide a backup copy in case of data corruption.

In order to confirm the correct operation of the system and evaluate its performance, we conducted several tests by inserting, storing and retrieving a set of documents, and the process was completed perfectly.

Conclusions and Recommendations:

Recommendations :

- 1- It should keep pace with technological development and use electronic archiving technology to develop an infrastructure towards e-government.
- 2- It is necessary to design electronic systems in the ID Cards Section to archive documents electronically.
- 3- Designing a database within electronic systems to provide the best services to the largest possible number of users.

Conclusions :

Electronic archiving helped in saving data and assists in the process of retrieval, modification and access to it quickly and easily, and it has advantages in providing in terms of material cost and storage space.

Electronic archiving programs provide protection and data backup, which makes them of great importance to work within institutions.

1- The Benghazi ID Cards Section relies on paperwork and uses the paper archiving system.

2- Saving effort and time for the employees in the ID Cards Section by using electronic archiving technology.

3 - The acceptance and satisfaction of employees with the use of electronic archiving technology in the department.

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