Utilizing Structured Query Language Database And Application XDK In Advanced Mobile Phones: Iraqi Police Model

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Abstract: - This Query obtains a fast response from the system which was designed to know the criminal history of people. The current problem is how to obtain the data stored in the database about criminals during the same time crime in Iraq capital Baghdad, which increases the speed of response to avoid possible risks and arrest criminals. The system is designed to inquire about the data stored in the database Structured Query Language MySQL to make the appropriate decision. This application contains the improved parts of the outline of 'smartphone' for the Federal Iraqi Police FIP. The principle movement engaged with configuration is how to spare the application capacity of the gadget to help capture offenders, or on the other hand, aroma who has a criminal record in the database by cops and their records in data frameworks FIP. The research adopted a Methodology database MySQL contains records of lawbreakers and Criminals wanted to eliminate. A foot watch officer can send information through this application and find the solution rapidly. That is added to the advanced messaging methods below the error rate. The MySQL database tables are planned with the Application Development Kit XD to coordinate this proposed and appropriate model through the three Stations test tables in Baghdad city that chose by Population density and danger levels. The search method was used in designing a database MySQL and application software XDK For smart devices. The results show that 75.07% of the system's response to the data available in the database that designed and will reduce the effort and time by searching for wanting criminals, and a criminal history in the virtual stations, that used in the city Related a large population density. New data access, the management system has been developed from the master database designed for this purpose and we can retain and retrieve data as needed.

Key-words: - Phone, Application, Smart, Database, SQL, XDK, Mobile

1 Introduction

Mobile phone utilization has copied beginning late. A few extents of the world have completely appreciated fast sending and high path of helpful correspondence. 70% of the total individuals ensure of what one cell phone In the context of the estimations, without the exceptional case. Iraq is one of the nation's riding the surge of new media transmission change, Cell phone use in Iraq has gotten the routinely developing force. It is spoken to that 78% of Iraqis affirm adaptable phones on a cell phone. Because of the increasing number of crimes in the country, it was important to utilize progressed and adaptable versatile administrations. This can be a diversion for the little size and availability of Personal Digital Assistant PDA and correspondence at whatever point, any place and at a fast to keep the commission of episodes and violations. The aim of this paper is to identify the process and update the basic data received and recorded in the database of security centers, and then obtain a fast response from the system which was designed to know the criminal history of people. the equipment used to Identity the required and registered information from the database and
response speed, Identify system components and develop skills for system users, To assess the presence of the framework and gadgets through the tables of value and proficiency.

"Recognition of human-computer operations based on keystroke sensing by smartphone microphone ", In this paper, human-computer processes were identified by a keystroke sensor using a smartphone. First, use the built-in microphone on your smartphone to sense the input sound from the computer keyboard. Then select keystrokes using fingerprint recognition techniques. [1] according to this paper the process of replication and simulation to learn decision-making processes for users and create human-like factors from Global Positioning System GPS data. [2] a broad study of the writing on versatile publicly supporting examination, featuring the parts of specific worries as far as execution needs during the improvement, structures, and key contemplations for their advancement. [3]

In this paper proposed the WiDE system, which is based on deep learning to estimate the distance from individual to individual depending on the encompassing Wireless FidelityWi-Fi signals. In particular, WiDE has two phases: disconnected learning and online forecast. [4] scarcely any arrangements have been proposed to beat wellbeing framework issues in Iraq. Tele_medicine is the arrangement that is probably going to survive and oversee moderateness issues. The Iraqi Tele_medicine Center directed an examination to research the practicality of actualizing telemedicine in Baghdad. The examination investigates Internet providers in clinics as far as sexual orientation, use, and access. [5] algorithms were created to order granular versatility and to recognize the structure of social gatherings that utilization cell phones. Presenting a technique that perceives four degrees of gathering versatility, stationary, climbing, strolling, and running. Likewise, utilizing numerous kinds of convenient sensors makes a calculation to assess the connection between the site and the distinctive versatile gathering.[6]

the emphasis is placed on the group's rapid and intensive mobility and mobile network signal data (control plane data), which contains data on versatility and correspondence. Preparing modules for unmanned clients were manufactured. Among these models utilized in versatile system reproductions, recreation results demonstrate that the base station's dynamic plan improves the capacity of saw clients to move.[7]

"Authentication in mobile cloud computing: A survey", This paper provides a comprehensive study of Merchant Category Codes MCC authentication methods to describe MCC authentication and the comparison with cloud computing methods. The classification of modern authentication methods is designed and most reliable efforts are audited in cash. [8]

The paper highlights that proper framework plan and the board can stop the impacts of undesirable progression and empower suitable kinds of self-guideline the framework. Along these lines, multifaceted nature sciences can help spare lives.[9]

This investigation intends to distinguish and break down stroke applications accessible on Apple iTunes and the Android Google Play Store. Applications for cell phones are progressively being recognized as another stage for the scattering of human services data.[10]

"Forecasting event attendance with Anonymized mobile phone data", In this paper, propose two methods using anonymous mobile phone data, to predict the maximum time attendance, for the known exceptional events in advance. It compares the time evolution of the number of text messages and voice calls, the way people predict that people are no longer streaming of the event, based on the flow of people.[11] according to this paper show the outcome of an investigation on the example of a mobile phone from the perspective of end buyers. The information was gathered from 1814 respondents crosswise over real urban communities in Malaysia. The insights introduced gives major data concerning the patterns in the cell phone market and utilization practices in Malaysia [12].

"The application of human-systems integration Planning the up and coming age of military worldwide situating framework, handheld gadgets", this article depicts the HSI practices that maintained The Military GPS User Equipment MGUE adventure. APL connected a framework building way to deal with making plans for the cutting edge handheld GPS gadgets, joining HSI into the way toward characterizing necessities and prototyping potential UIs. Input from beginning client testing was to a great degree positive, and proceeding with this framework building methodology should help guarantee that the following GPS gadgets will better address clients' issues, bringing about the more productive assignment execution [13].

the paper was directed to examinations of certified execution and the degree of strong work endeavors. This examination included 243 cell phone customers from a tremendous association. Picked deliberately customers
who work generally with work area PCs and convenient workstations, and these customers address "non-adaptable" the greatest and.[14]

presents three commitments to the investigation of the utilization of cell phone-based mishap identification frameworks, the location of auto collisions, and second, the structure of the cellphone-based mishap discovery framework. Third, identifying episodes dependent on the cell phone that diminishes in general blockage of traffic and expands the availability of crisis responders.[15]

In this paper, focused particularly on the sensor component, which uses an accelerometer, microphone, GSM radio and/or GPS sensors in these phones to detect drilling, bumps, braking, and networking. Neri cell addresses many challenges, including the actual acceleration of the accelerometer on the phone. [16] broadcast communications request is assessed in models for private mainline and cell phone administration for creating nations. Portable month to month value flexibilities is substantial. Another and significant exact finding is that even though wire-line telephones are substitutes in the portable market, the opposite isn’t valid—cell phones are not substitutes in the wire-line advertise, and in certainty might be viewed as supplements.[17] “ The mobile phone as media”, he recommends that cell phone examination will move from the idealistic and tragic towards investigations by progressively traditional hypothetical and methodological instruments and methodologies found in the media.[18]

This research shows a formal semantics of the Unified Modeling Language UML arrangement outline. In the interim, the dynamic semantics are characterized as far as the state advances that are done by the technique summons in the graph. At the point when a message is executed, it must be reliable with a framework state. [19]

The Iraqi Tele_ medicine Center understood an assessment to research Reachability of applying Tele_ prescription in Baghdad the assessment request about workplaces' Web benefits the degree that sort, use, and get to. Methodology A diagram based assessment was driven by field visits and direct parties, Results in 71% of the ace work environments approach the Web through fiber-optic affiliation, the progress can handle low-information exchange keep Web.

2 Materials and Methods

The development of the smartphone system for the Iraq police FIP makes use of MY SQL database and design application in XDK. The use of this approach to easily link databases with smartphone applications is available in a cost-effective manner. The system consists of three tables [criminal _ rec, criminal _ list, info _ personal] the user enters its data which have been saved already in the database show Tables [1, 2, 3, 4].

Table1. Database ( My Sql )

| Structure | SQL | Search | Query | Export | Import | Operations | Privileges | Size |
|-----------|-----|--------|-------|--------|--------|------------|------------|------|
| Table     |     | Action |       | Record | Type   | Collation  |            |      |
| Criminal _ rec | | | | | | | | |
| Criminal_list | | | | | | | | |
| Criminal _ Personal | | | | | | | | |

Table 2 Criminal List Consists Of Two Columns, The Number Of The Crime And The Type Of Crime.

Table2. Criminal List (My Sql)

| Criminal_No | Criminal_Type |
|-------------|---------------|
| 1           | A             |
| 2           | B             |
| 3           | C             |
| 4           | D             |
Table 3 criminal_rec consists of a 5-column crime record (national identification number or passport number, national identity number, crime number, date of crime, place of crime, ruling).

Table 3. Criminal Rec (My Sql)

| IC_N Pass | Crimi nal_N O | Criminal_Dat e | Criminal _Place | RULING |
|-----------|---------------|----------------|-----------------|--------|
| 1         | 2             | 14-1-215       | BAGHD AD        | DON    |
| 2         | 4             | 05-10-2010     | Hella NON- DON  | E      |

Table 4 the criminal personal table consists of 7 columns (passport number or national id, name, date of birth, gender, blood type, telephone number, e-mail address).

Table 4 Criminal Personal (My Sql)

| IC_NOPASS | NAME | PLACE_DATE | GENDER | BLOOD | TEL_NO        | E_MAIL             |
|-----------|------|------------|--------|-------|---------------|--------------------|
| A130987   | X    | 1-1-1999   | MALE   | 0+    | 07799008866   | xyz@gmail.com      |
| A547629   | Y    | 2-3-1988   | MAL    | A+    | 09708976541   | abc@yahoo.com      |

Algorithm Binary_Search (Flow Chart)

Through the scheme below Fig 1, the algorithm system works to send the information query through the foot patrols or from the investigative offices with the criminals and suspects. This information is checked in the previously stored and updated list, if the suspect has a record in the data list sends an order to the database for the purpose provide the query with the required information and send it back to the user at the same moment of transmission, which reduces the time of verification of the criminal record of the suspect, otherwise, the query will return no data to the suspect.

Fig. 1. Flowchart system

It is an algorithm used to find an entry in an ascending or descending matrix, whether numbers or texts. The binary search algorithm depends on the following requirements
1. The amount of storage needed to implement the algorithm
2. The amount of complexity of the algorithm
3. Number of moves
4. Number of comparisons
In order for the binary search to be successful, the search list must be ordered, and the binary search is effective "quickly in lists with a large number of items".

If we want to find the value (30) in the following list, we will clarify the values of the research process indicators:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|
| 9 | 11| 15| 20| 30| 41| 56| 60|


we find that: \( \text{Low} = 1 \), \( \text{High} = 8 \) \( \text{Middle} = (1+8) \div 2 = 4 \)

After two cycles of moves, we will find that the item is in the list, as follows:

1. \( \text{Low} = 1 \), \( \text{High} = 8 \), \( \text{Middle} = 4 \)
2. \( \text{Low} = 4 \), \( \text{High} = 8 \), \( \text{Middle} = 6 \)
3. \( \text{Low} = 4 \), \( \text{High} = 6 \), \( \text{Middle} = 5 \)

Here we find that \( \text{Item} = \text{Name}[\text{Middle}] \) So the item is in the list and the search process stops.

If we take a value that is not in the list, for example "(Item = 10), the moves are as follows:

1. \( \text{Low} = 1 \), \( \text{High} = 8 \), \( \text{Middle} = 4 \)
2. \( \text{Low} = 1 \), \( \text{High} = 4 \), \( \text{Middle} = 2 \)
3. \( \text{Low} = 1 \), \( \text{High} = 2 \), \( \text{Middle} = 1 \)
4. No change \( \text{Low} = \text{Middle} \)

Whereas Item \( <> \) Name[Middle] the item is not present in the list.

Search (Item, N, Name)

\[
\text{Low} \leftarrow 1; \quad \text{High} \leftarrow N; \quad \text{Middle} \leftarrow (\text{Low} + \text{High}) \div 2 \\
\text{While} \ (\text{Low} <> \text{Middle}) \text{ and } (\text{Item} <> \text{Name}[\text{Middle}]) \text{ Do} \\
\text{If} \ \text{Item} < \text{Name}[\text{middle}] \text{ then} \\
\quad \text{High} \leftarrow \text{Middle} \\
\text{Else} \\
\text{If} \ \text{Item} > \text{Name}[\text{Middle}] \text{ then} \\
\quad \text{Low} \leftarrow \text{Middle} \\
\text{end if} \\
\text{End if} \\
\quad \text{Middle} \leftarrow (\text{Low} + \text{High}) \div 2 \\
\text{End while} \\
\text{If} \ \text{Item} = \text{Name}[\text{Middle}] \text{ then Output ('Item is found in the list')} \\
\text{Else} \\
\quad \text{Output ('Item is not found in the list')}
End if
End Binary_Search

**Smartphone Design In The Program XDK**

At this level, we have developed a mobile smartphone using the program XDK and linked it to a database MYSQL by code PHP. The system consists of three pages, the first page (the main interface) that the user enters for the suspect data and send it through the use of a query to a specific database, and the second page (the suspect data), which operates as a system for checking the user data in real-time caller and associated pages first to the internet and the third page (additional data). Begin the framework with every one of the information put away in the database of lawbreakers react to the demand of the guest utilizing the web see Fig 2, 3 and Fig 4.

![Fig. 2. Emulate The First Page](image1)

![Fig. 3. Emulate the second page](image2)

![Fig. 4. Emulate the third page](image3)

**2.3 Network Scenario**

System Situation for on the web and disconnected FIB versatile access Fig 5.
Test Of Device

It is a 2.5G cell phone including an extensive, high-goals touchscreen show, and many the peripherals run of the mill of present-day gadgets. Table 5 records its key parts. The outstanding contrasts between our gadget and an advanced cell phone are the absence of a camera and a 3G modem. There are three components to the exploratory setup: the Test- of- Device ToD, equipment information, procurement framework, and a host PC see Table 5.

Table 5. Smartphone Hardware

| Part      | Particular      |
|-----------|-----------------|
| SP        | Samsung S3C3422 |
| CPU       | ARM 1020T @ 400 MHz |
| RAM       | 128 MiB SDRAM   |
| Flash     | 256 MiB NAND    |
| Cellular Radio | TI Calypso      |
| LCD       | Topology 480 × 640 |
| SD Card   | SanDisk 3 GB    |
| WiFi      | Acton 4136AQ    |
| Audio     | National        |
| amplifier | Semiconductor LM4853 |
| Power controller | NXPCF50633 |
| Battery   | 1200 mAh, 3.7 V Li-Ion |

3 Results
In Fig 5 Network scenario, The smartphone has been distributed to three local police stations (virtual) in the city of Baghdad, with almost equal distances in terms of geographic and population distribution, and the installation of the database in a separate center and away from it at the same distance in the middle of these distances. The city’s needs for a number of stations are close to 20 stations to meet the needs and cover the city’s geographical area, depending on the population of each station, by dividing it by risk areas. Data were taken from suspects or dangerous criminals and sent through the database, the results were as in Table 6.

Table 6. Simulate Smartphone Station In
4 Discussion

Through the results obtained from Table (6), Fig 6, Fig 7, Fig 8, and Fig 9 relation between response with information then send for one day. By comparing the results obtained from the tables and graphs of the stations and the available information the response rate for the station number (2) 84% is the best to provide the information stored in the database of questions, where there is no data about some people in other stations this depends on the availability of information and the inclusion in the database for these stations, in Figure 12 shows that the percentage of response is good, which facilitates the Decision - making process very quickly. Querying the data obtained are preliminary results from stations distributed geographically For the city and according to population density depending on the amount of data transmission at the time of peak load on the network.

Fig. 6. Response situations

Station 1

Fig. 7. Station1 Response & Percentage

Station 2

Fig .8. Station2 Response & Percentage

Station 3

Fig. 9. Station3 Response & Percentage
Conclusion

Through this test, the use of this system is achieved effectively, and through the results obtained in a large area of the city, with the possibility of increasing the coverage of the total city and the level of the institution. In this system, the police utilize the telephones to empower officers by walking watch, to explore into to confirm criminal History of them. These quick access records catch. utilized accomplish that framework MY SQL To make the framework Database And (XDK, Int appl) construct the structures. the designs demonstrate that the rate of reaction and access to data at a high rate and this relies upon the acquaintance of information to the database. Consequently, wrongdoing levels will be diminished by capturing individuals before violations happen. Most of the institutions concerned can apply this system and get a response quickly and effectively. As indicated by the previously mentioned issue, it drove the planner to suggest an E-structure capturing application to recall in data about presumed individuals in The prime area. Such administrations can assist improve the chronicle procedure from the wrongdoing's data furthermore, send it to the Related office indeed, even previously touching base in spots of confinement. The use of this application can be extended to more than one city or country.

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Poll for UI

Fulfillment
If it's not too much trouble react to every one of the things and include remarks in the spaces gave For things that are not material, if it's not too much trouble tick: NA

| The general response to the Software |   |   | Na |
|--------------------------------------|---|---|---|
| 1 The App Was:                       | Terrible | Wonderful | O |
| 2 The App Was:                       | Difficult | Easy | O |
| 3 The App Was:                       | Frustrating | Satisfying | O |
| 4 The Summary Had:                   | Low Accuracy | High Accuracy | O |
| 5 The App Was:                       | Dull | Stimulating | O |
| 6 The App Was Rigid:                 | Flexible | O |
| Screen                               |             |             | N |
| 7 Reading The Characters Was:        | complicated | Easy | O |
| 8 Navigating The Content Was:        | Not At All Intuitive | Exceptionally Unintuitive | O |
| 9 Organization Of Information Was:   | complicated | Very Clear | O |
| 10 The Background And Colors Were:   | Unsuitable | Suitable | O |
| Wording And System Information       |             |             | N |
| 11 Utilization Of Terms All Through The Framework | Inconsistent | Consistent | O |
| 12 The Wording Was Identified With Errand: | Ever | Always | O |
| 13 Status Messages On-Screen Was:    | Inconsistent | Consistent | O |
| 14 Prompts For Input Were:           | complicated | Clear | O |
| 15 The Framework Reports The Client's Advancement | Never | Always | O |
| 16 Error Messages Were:              | unaided | Helpful | O |
| Learning                             |             |             | N |
|   | Description                                                                 | Status         |   |
|---|-----------------------------------------------------------------------------|----------------|---|
|17.| Figuring Out How To Work The Framework Was:                                | Complicated     | Easy| O |
|18.| Investigating New Highlights By Experimentation Was                         | Complicated     | Easy| O |
|19.| Recollecting Names And Utilization Of Charges Were:                         | Complicated     | Easy| O |
|20.| Performing Errands Is Direct                                               | Ever            | Always| O |
|21.| Help Letter On The Scanner Were:                                           | unaided         | Helpful| O |
|   | System Capabilities                                                         | N              | a  |
|22.| The App Allows For User Feedback                                           | Ever            | Always| O |
|23.| The App Speed Was                                                          | Too Slow        | Fast Enough| O |
|24.| The App Reliability Was                                                     | Unreliable      | Reliable| O |
|25.| The App Was                                                                | Poorly Organized| Well Organized| O |
|26.| Downloading The Info Was                                                   | Difficult       | Easy| O |