



INSURANCE MANAGEMENT SYSTEM

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ABSTRACT

An insurance company always requires making records of its customers' details, agents, policyholders, payments, and various other crucial information. Hence it is under tremendous pressure to maintain their day-to-day activities. Entire records must be updated timely, even a vehicle insurance system's slight mistake could complicate things. It is exceedingly difficult to handle bulk data since human memory is weaker than its electronic counterpart. As a result, there is a need for an automatic program or application, which can efficiently manage the records of the company, provides instant access to all the details in one click, and can improve productivity.

INTRODUCTION

Insurance is a two-part concept; namely, the insurer and the insured, also called policyholders. The insurer is the insurance company, while the insured is the one who claims the benefit. Applying for insurance policies and schemes must be managed by the company that provides those services and at the same time these million schemes must be managed too, with entire records having to be managed and updated at regular intervals. Failure to manage this confidential and sensitive data may result in lack of trust in the company. Such problems are usually quite simple logic problems that can be easily circumvented.^[4] Our solution comes in handy when you want to conveniently update your status on the insurance policy without any hassle. Our solution has many impressive features that can help people to apply for any plan without being in any sort of queue or having any waiting period. Hence, we have devised a solution to help solve these simple data management problems. So, in order to meet the insurer's objectives and needs, we

designed an approach that will attract consumers. And because the system will be user-friendly, all people, whether they are familiar with insurance or not, will accept it^[1].

LITERATURE SURVEY

An individual or a company when struck with monetary loss can claim insurance through a contract with a paid firm. They pay premiums in return for the completion of a contract. The most common claims involve medical services, automobile or property damages and loss of life. Insurance claims broadly are of three types ^[3],

1. Health Insurance: Health insurance claim is the insurance that covers all or part of the risk that a person incurs medical expenses, spreading the risk over the substantial number of people.
2. Life Insurance: Life insurance is a contract between a policyholder and an insurer whereby the insurer agrees to pay a sum of money to the beneficiary in exchange for a premium upon the death of an insured. Depending on the contract, other events, such as terminal illness, may also trigger the payment.
3. Property Insurance: Property insurance provides the policyholder an immunity towards risks involving property damage. This may include damages due to fire, theft, weather, natural phenomena such as earthquake and so on.

Insurance has become an integral part of human life and business. It eliminates all the risks and fear of loss' involved in operations of business and human lives. By providing funds, it provides cover against sudden loss thereby enhancing security. Businesses can expand globally due to absence of risks. There are many more applications of insurance in various industries.

OBJECTIVE OF THE PROJECT

To create a better solution for organizing and managing information related to insurance policies using a much more user-friendly software. And to match the requirements of any sort of client more efficiently.

PROBLEM STATEMENT

In the insurance process, the insured must pay certain fees to the insurance company at certain time intervals. And the insurer, in turn, undertakes to assume the losses and economic expenses of the insured. Therefore, the risk of financial loss rests entirely with the insurance company. The insurance company needs to keep a lot of information such as transactions related to insurance policies, premiums, policy expiration, agent management, calculation of broker commissions, etc. All this is going to be automated and what is required is a web application that relates them in a relative and logical way so that the current system can be replaced and accepted without major changes and problems. The web application should provide quick access to the

records that are kept and should show the important reviews about the business so that the growth can be easily compared, and it should be detailed with the various reports so that the important decisions can be made easily.^[2]

EXISTING SYSTEM

The existing system of the insurance industry is as follows. It works on the following track.

- Self-Service Obtaining
- Agent Service Obtaining
- Service Online

It means there are only three ways to access insurance and the entire industry is only working on these three levels. If we want to take out life insurance, we can choose different routes. Either we must contact the bank, when we go to the bank, the first problem is where to ask and how long the process takes. And if we get the perfect venue, this will be a very long process as there are so many errors in this installation.^[4] So, even though we buy the policy, the bank will often not attend to you. The process thus becomes tedious and inefficient. When we call an agent, is the agent IRDA certified or not? That is one of many big problems. These agents could sell the policy the wrong way, or the wrong policy for your business, which is obviously detrimental.

Existing system problems.

1. Customer is not receiving adequate service
2. Agents can mislead customers
3. There is no place where you can compare or analyze other products from other companies
4. The customer cannot collect correct information, contact an agent or buy a policy online.^[1]

PROPOSED SYSTEM

- The existing insurance system has a long process to obtain life insurance. It also contains a long chain of intermediaries.^[1]
- We aim to improve the existing system to enhance user experience, connect the policyholders directly to the insurer to avoid the involvement of middlemen
- Provide sophisticated ways to store and handle data without any loss of data.
- We have devised a code that uses SQL-connectivity to ensure swift accessibility to insurers.

- We have implemented optimal methods to secure the data from being stolen. The agents of the company can only access their clients' data.

HARDWARE REQUIREMENTS

- Processor: Intel Core i3 3.5GHz
- Hard Disk: 40GB
- RAM: 4GB or above
- HDD: 1TB

SOFTWARE REQUIREMENTS

- Operating System: Windows 10 Pro (64-bit), OS X Leopard (version 10.5) and above
- Programming Language: Python 3.9.3
- Database: MYSQL
- IDE : Python IDLE

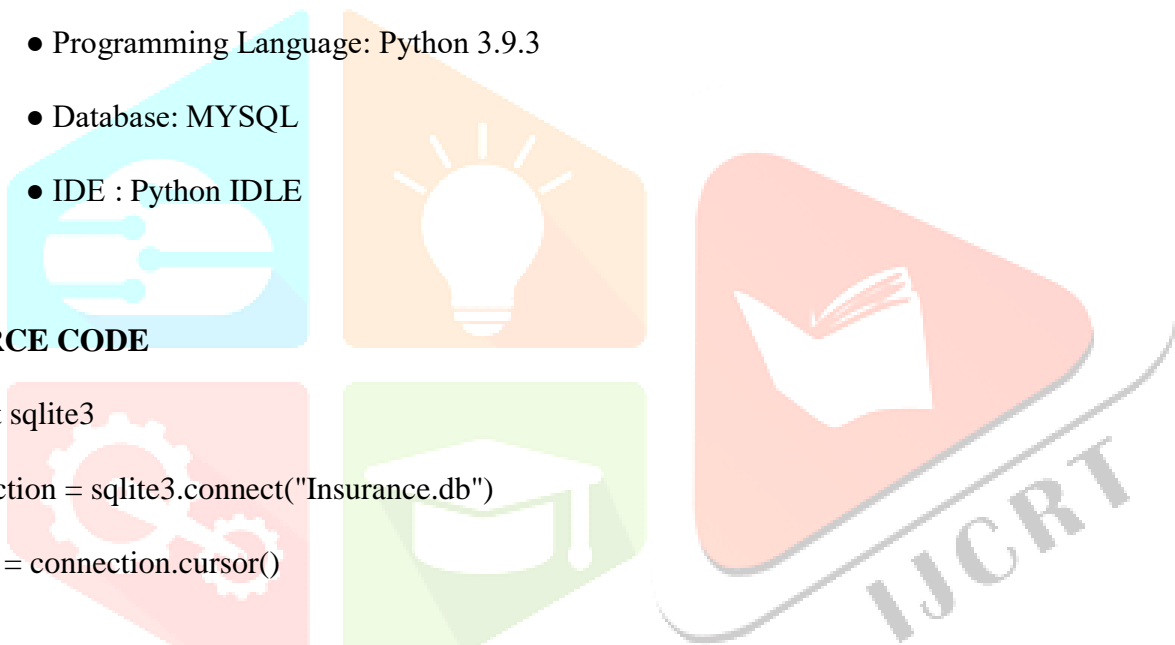
SOURCE CODE

```
import sqlite3
connection = sqlite3.connect("Insurance.db")
cursor = connection.cursor()

#creating tables

insurers = "CREATE TABLE IF NOT EXISTS INSURER_DETAILS(
    Name VARCHAR(30), DateOfBirth VARCHAR(20), UserID VARCHAR(25) PRIMARY KEY,
    Password VARCHAR(30), Policy varchar(30)
)"

cursor.execute(insurers)
```



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Employees = ''' CREATE TABLE IF NOT EXISTS EMPLOYEE_DETAILS(

UniqueID VARCHAR(20) PRIMARY KEY, Name VARCHAR(25), Designation VARCHAR(50),

Mobile_Number VARCHAR(25)

)'''

cursor.execute(Employees)

while True :

print("\t\t\t Welcome\n \t\t\t Brought to you by: The Boyz ")

print("Press 1 if you are an EXISTING USER \nPress 2 if you a NEW USER \nPress 3 if you are an EMPLOYEE\nPress 4 if you want to exit")

cho = int(input("Enter your choice: "))

if cho==1:

USERID = input("Enter your userID : ")

PASSWORD = input("Enter your password : ")

cursor.execute("SELECT Name FROM INSURER_DETAILS WHERE UserID = '"+USERID+"' and Password = '"+PASSWORD+"'")

var = cursor.fetchone()

print('welcome', var[0])

connection.commit()

elif cho==2:

```
NAME = input("Enter your NAME: ")
```

```
DateofBirth = input("Enter your DATE OF BIRTH: ")
```

```
USERID = input("Create a USERID: ")
```

```
PASSWORD = input("Create a strong PASSWORD: ")
```

```
pol = input("Policy list\n1. Vehicle Insurance\n2. Life Insurance\n3. Health Insurance\nPlease enter the number corresponding to the policy you have purchased :")
```

```
Insurer = [(NAME, DateofBirth, USERID, PASSWORD, pol)]
```

```
cursor.executemany("INSERT INTO INSURER_DETAILS VALUES (?,?,,?,?)", Insurer)
```

```
connection.commit()
```

```
print('Account successfully created!')
```

```
elif cho==3 :
```

```
print("Press 1 if you are a NEW EMPLOYEE \nPress 2 if you are an OLD EMPLOYEE")
```

```
CHO = int(input("Enter here: "))
```

```
if CHO == 1:
```

```
NAME = input("Enter your name: ")
```

```
UNIQUEID = input("Enter the UNIQUEID assigned to you: ")
```

```
DSGN = input("Enter your designation: ")
```

```
Mob = input("Enter your Mobile Number: ")
```

```
Dat = [(UNIQUEID, NAME, DSGN, Mob)]
```

```
cursor.executemany( "INSERT INTO EMPLOYEE_DETAILS VALUES(?,?,?,?)", Dat)
```

```
connection.commit()
```

```
elif CHO==2 :
```

```
UID = input("Enter your UNIQUEID: ")
```

```
cursor.execute("SELECT UniqueID FROM EMPLOYEE_DETAILS WHERE UniqueID='"+UID+"'")
```

```
data = cursor.fetchone()
```

```
connection.commit()
```

```
if UID==data[-1] :
```

```
print("Press Y if you want to access the details of insurers")
```

```
ins = input("Enter here: ")
```

```
if ins=="Y" or ins=="y" :
```

```
cursor.execute("SELECT * FROM INSURER_DETAILS")
```

```
print(cursor.fetchall())
```

```
else:
```

```
print("Thank you, the program is now terminated")
```

```
break
```

```
else :
```

```
print("The program is now terminated.")
```

```
break
```

```
elif cho==4:
```

```
print("The program is now terminated. Thank you !")
```

```
break
```

RESULTS

```
*Python 3.7.4 Shell*
File Edit Shell Debug Options Window Help
Python 3.7.4 (tags/v3.7.4:e0935912e, Jul 8 2019, 19:29:22) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\eps.scl\Desktop\INSURANCE MANAGEMENT FINAL.py =====
                Welcome
                Brought to you by: The Boyz
Press 1 if you are an EXISTING USER
Press 2 if you a NEW USER
Press 3 if you are an EMPLOYEE
Press 4 if you want to exit
Enter your choice: 2
Enter your NAME: Adhrith
Enter your DATE OF BIRTH: 010101
Create a USERID: adho1
Create a strong PASSWORD: adho1
Policy list
1. Vehicle Insurance
2. Life Insurance
3. Health Insurance
Please enter the number corresponding to the policy you have purchased :2
Account successfully created!

*Python 3.7.4 Shell*
File Edit Shell Debug Options Window Help
Python 3.7.4 (tags/v3.7.4:e0935912e, Jul 8 2019, 19:29:22) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\eps.scl\Desktop\INSURANCE MANAGEMENT FINAL.py =====
                Welcome
                Brought to you by: The Boyz
Press 1 if you are an EXISTING USER
Press 2 if you a NEW USER
Press 3 if you are an EMPLOYEE
Press 4 if you want to exit
Enter your choice: 3
Press 1 if you are a NEW EMPLOYEE
Press 2 if you are an OLD EMPLOYEE
Enter here: 1
Enter your name: Deep
Enter the UNIQUEID assigned to you: dg0102
Enter your designation: Manager
Enter your Mobile Number: 7204749127
```



```
*Python 3.7.4 Shell*
File Edit Shell Debug Options Window Help
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul 8 2019, 19:29:22) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
RESTART: \\eps-students\EPS-Students\Class 12\Class 12 CS - Projects\Team 3- Insurance Man
agement system\BEST ONE.py
                Welcome
        Brought to you by: The Boyz
Press 1 if you are an EXISTING USER
Press 2 if you a NEW USER
Press 3 if you are an EMPLOYEE
Press 4 if you want to exit
Enter your choice: 3
Press 1 if you are a NEW EMPLOYEE
Press 2 if you are an OLD EMPLOYEE
Enter here: 2
Enter your UNIQUEID: NINJA
Press Y if you want to access the details of insurers
Enter here: Y
[( 'sub1', '010101', 'sub12', 'sub1', '1'), ('Deep', '010101', 'Deep', 'Goyal', '1'), ('Adhrith', '010101', 'Adho1',
'adh01', '3')]

*Python 3.7.4 Shell*
File Edit Shell Debug Options Window Help
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul 8 2019, 19:29:22) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\eps.scl\Desktop\INSURANCE MANAGEMENT FINAL.py =====
                Welcome
        Brought to you by: The Boyz
Press 1 if you are an EXISTING USER
Press 2 if you a NEW USER
Press 3 if you are an EMPLOYEE
Press 4 if you want to exit
Enter your choice: 1
Enter your userID : adh01
Enter your password : adh01
welcome Adhrith
```

CONCLUSION

Our code systematically stores data in a secure server. The sophisticated Python SQL connectivity is used to make sure that user can access the data without installing multiple applications. The data is secured by a user name and a password that cannot be repeated or accessed by an intruder to the system.

REFERENCES

1. https://www.ijert.org/research/online-insurance-management-system-IJERTCONV2IS04_042.pdf
2. <https://ieeexplore.ieee.org/document/7490785>
3. <http://jctjournal.com/gallery/26-june2019.pdf>
4. <https://ceeconference.vse.cz/wp-content/uploads/proceedings2017.pdf#page=213>

