

On the Development of Expert Systems

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Abstract:

This report shows a way to deal with building specific Personal Computer helped programming designing devices for the improvement of master frameworks. These apparatuses structure an incorporated improvement condition permitting the Personal Computer supported advancement of various applications in the suitable field. The coordinated condition speaks to the mixture of Secure Windows Initiative programming language and Data Base Management System PostgreSQL apparatuses. Secure Windows Initiative- programming language do providing the most fitting apparatuses to the arrangement of intelligent assignments in master frameworks. Consequently, we have to apply a suitable information base administration framework to expand the ability of the information base. For this reason we utilized the most developed open source Postgre-Sstructured QueryLanguage apparatuses. Because of our exploration we have made apparatuses empowering the similarity of this programming language.

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I. Introduction

Intelligent information systems and advancements are ones of the most encouraging and quickly creating fields in hypothetical and applied data innovations. It has significantly affected all territories of doing research and innovation identified with the utilization of Master frameworks involved an extraordinary spot in the advancement and utilization of clever data frameworks.

Different sorts of programming apparatuses can be utilized to enhance ES, among which is by all accounts the most fitting. Be that as it may, its can't oversee a lot of information. In this way, we have to incorporate a proper information base

administration framework to support the capability of the information base.

For this reason we utilized the most exceptional open source PostgreSQL apparatuses. Because of our examination we have made apparatuses empowering the similarity of its and Database Management System PostgreSQL inside the incorporated improvement condition.

II. Methods

The report depicts the instruments and techniques which were utilized to make a coordinated improvement condition.

The coordinated improvement condition incorporates:

- Secure Windows Initiative - programming language
- XPCE for the designs segment
- PostgreSQLLanguage
- ODBC Driver PostgreSQL StructuredQueryLanguage database management system

Secure Windows Initiative - programming language is an open arrival of Secure Windows Initiative - programming language. Being shaped from the underlying information as a chain of thinking from the information base ES can settle on a choices in remarkable circumstances for which the calculation isn't known ahead of time. In addition, issue arrangement is relied upon to be done in conditions where the underlying data is inadequate, untrustworthy, and uncertain, during subjective procedure evaluation

To create illustrations applications, the Secure Windows Initiative - programming language dissemination bundle incorporates instruments that empower the improvement of a graphical UI. These instruments for Secure Windows Initiative - programming language are given by XPCE.

XPCE is a stage autonomous device for Secure Windows Initiative - programming language, Lisp and other intelligent progressively composed programming dialects.

It is a toolbox for creating graphical applications in Prolog and other intuitive and powerfully composed dialects. XPCE pursues a fairly one of a kind methodology of for creating Graphical UserInterface applications, which we will attempt to condense utilizing the focuses underneath.

Add object layer to Prolog

X-beam photoelectron spectroscopy part is an article orchestrated motor that thinks about the

essentialness of techniques in different tongues. The inborn plans are depicted in C for speed comparatively as to depict the stage self-rule layer. Applications, comparably as some application-organized libraries are depicted as its classes with their strategies depicted in Prolog.

Prolog-depicted techniques can get debates in close by Prolog information, neighborhood Prolog information might be associated with its occasion

Elevated level of deliberation

X-beam photoelectron spectroscopy graphical layer gives a high thought level, covering subtleties every so often managing, redraw-the authorities and association the board from the application programming engineer, while so far offering access to local people to administer unprecedented cases.

Endeavor speedy Prolog improvement cycle

its classes are depicted in Prolog and the procedures run usually in Prolog. This proposes you can no ifs, ands or buts cross the edge between your application and the graphical UI code inside the tracer. It besides determines you can alter source-code and recompile while your application is running. Stage independent tasks.

POSTGRESQL

PostgreSQL is a thing social database the load up framework with an accentuation on sensibility and checks consistence. As a database server, its fundamental limits are to store information safely and return that information because of mentioning from other programming applications. It can oversee staying fundamental occupations going from negligible single-machine applications to huge Internet-confronting applications with different synchronous clients

PostgreSQL is ACID-satisfying and worth based. PostgreSQL has uneatable perspectives and created sees, triggers, remote keys; bolsters works and set away methodologies, and other expandability .

.It is free and open-source, discharged under the focal points of the PostgreSQL License, a tolerant programming award.

Relationship among PostgreSQL and Programming language is given by an Open Database Connectivity driver

An Open Database Connectivity driver utilizes the Open Database Connectivity interface by Microsoft that enables applications to get to information in database the board frameworks utilizing SQL as a standard for getting to the information..

The Open Database Connectivity :

```
odbc_connect('PostgreSQLProlog', __, [
user(postgres), password('1234'),
alias(PostgreSQLProlog), open(once)]).
```

Disconnecting from the database server
closeDatabase:-

```
odbc_disconnect(PostgreSQLProlog).
```

```
odbc_table_column(PostgreSQLProlog, Table,
Column),
write(Table-Column).
```

Retrieval:

getList(Table):-

```
openDatabase,
concat('SELECT * from "', Table, X),
concat(X, "", Y),
odbc_query(PostgreSQLProlog, Y , Row,
[types([integer, string, string, string]))],
write(Y),
write(Row),
write_in(Row).
```

Receiving:

getList(Table, Id):-

```
openDatabase,
concat('SELECT * from "', Table, X),
concat(X, "", Y),
odbc_query(PostgreSQLProlog, Y , Row,
[types([integer, string, string, string]))],
write(Y),
write(Row),
write_in(Row).
```

Selection:

selectList(Table, Name, Value):-

```
openDatabase,
concat('SELECT from "', Table, X1),
concat(X1, " WHERE ' , X2),
concat(X2, Name, X3),
concat(X3, ' = ' , X4),
concat(X4, Value, X),
odbc_query(PostgreSQLProlog, X, Row,
[types([integer, string, string, string]))],
write(Row).
```

Deleting:

deleteList(Table, Name, Value):-

```
openDatabase,
concat('DELETE from "', Table, X1),
concat(X1, " WHERE ' , X2),
concat(X2, Name, X3),
concat(X3, ' = ' , X4),
concat(X4, Value, X),
odbc_query(PostgreSQLProlog, X, Affected,
[types([integer, string, string, string]))],
write(Affected).
```

Discussion

Programming language and PostgreSQLStructuredQueryLanguage association

So as to associate and oversee XPCE objects from inside the SWI-Programming language-piece condition, the vital predicates are added to the program

- new (? Referencing, + Class (argument))
- send (Referencing, + Method (argument))

- get (+ Referencing, + Method (argument), - Result)
- free (+ Referencing)

Open Database Connectivity is an application interface for giving access to database. So as to access to the database, it is important to choose the information source in the "Information source overseer" window.

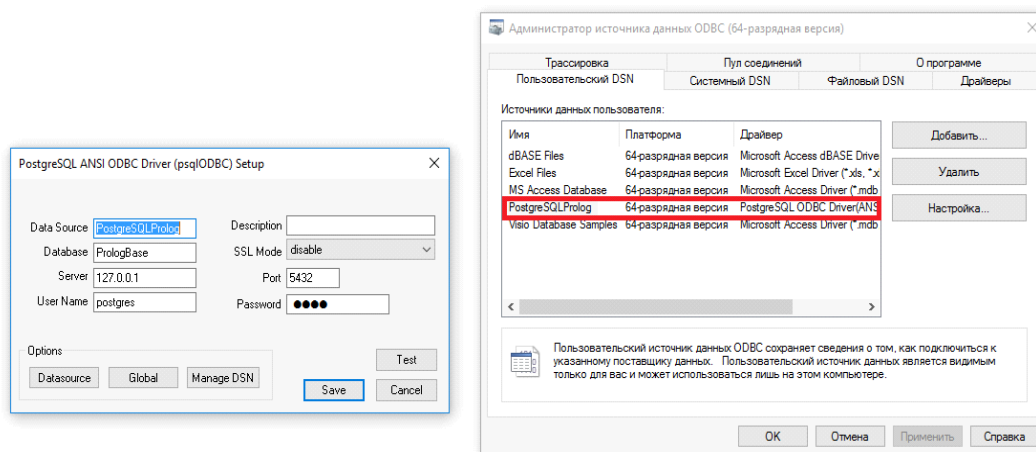


Fig. 1. ODBC Data Source Administrator.

As the consequence of the exploration we have built up an information base and devices for the determination of information from databases utilizing this intelligent programming language and DBMS PostgreSQL.

In view of the fundamental predicates empowering the similarity of its and PostgreSQL, the accompanying documents were made, to be specific:

- UserInterface.pl - User interfacing
- LocalBase.pl – Non global Database
- DataConnection.pl - Contains the capacities for association with the ODBC driver.

Later on, it is additionally important to conceive the plausibility of including not just a specific arrangement of information to the information base, yet in addition including new induction rules not existing at the hour of framework improvement. Accordingly, this affirms the way that the advancement of a completely fledged master arrangement of this sort is an unpredictable and costly errand.

Sorted out question language information portrayal in Programming language-databases have an inadequately organized, anyway incredibly rich game plan of data types. A couple of sorts of data have analogs with Programming language. In any case, sorting out to a whole number can be the correct decision for a specific application. That is the clarification it is fundamental to see how Structured Query Language information types can be tended to in Programming language.

The Programming language interface describes the going with sorts of Programming language data with the foreordained default change.

molecule

It is used as per usual for Structured Query Language types cook. Can be used for all non-fundamental sorts.string

A string of the all-encompassing SWI-programming language type.

codes

Rundown of code characters. Can comprise of any measure of content.

whole number

Utilized as a matter of course for the SQL, little int, little int and whole number piece types.

coast

Utilized as a matter of course for SQL genuine, buoy and twofold types.

time

A PROLOG expression for the time position (Hour, Minute, Second) utilized

Summary

On the basis on conducted research the following program and GUI was developed:

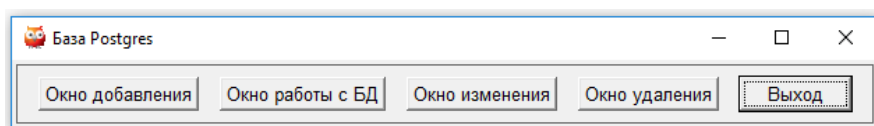


Fig.1. The main window of the program

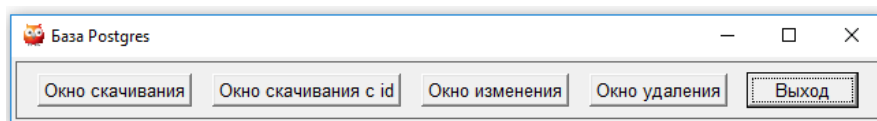


Fig.2. The menu for working with database

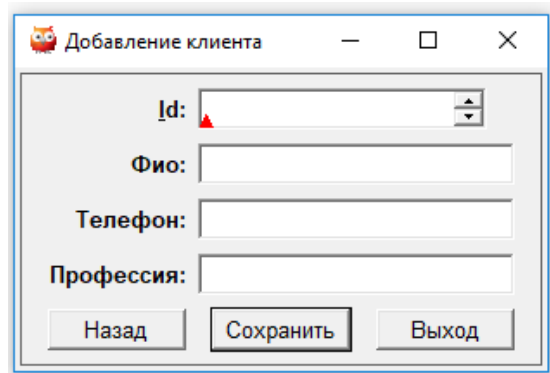


Fig.3. Adding form

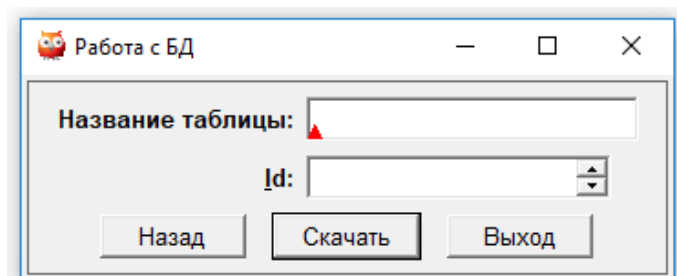


Fig.4. Downloading from database form

Program, which is presented in this report, is an Open Source the officials gadget for Postgres and Prolog. It can download, change and eradicate data from PostgreSQL database. Customer can physically pick the database to work with. After the download, all information is taken care of in

.pl record and arranged to work. Using this program customer in like manner can incorporate, search, adjust and eradicate lines from this record. So we figure, That this program can in all likelihood transform into a segment or a module of complete CASE mechanical assembly

programming to work with both PostgreSQL and Programming language. It is proposed to address the issues of both fledgling and experienced Postgres customers the equivalent, giving a mind blowing graphical interface that improves the creation, backing and usage of PostgreSQL databases.

III. Conclusions

A significant element of the master framework is that the client can't just get a discussion, yet additionally to get to all the information from framework stockpiling by posing applicable inquiries.

The utilization of master frameworks settles on it conceivable to settle on choices in novel circumstances for which the calculation isn't known ahead of time and is shaped from the underlying information as a chain of thinking from the information base.

The curiosity of the new CASE instrument exhibited is that it guarantees the similarity of its and Databasemanagement system PostgreSQL inside the system of a solitary incorporated improvement condition. Later on this will be material to the advancement of different master frameworks.

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