International Journal of LNCT, Vol 2(5)
ISSN (Online): 2456-9895

Study of student campus eligibility portal

Saleena Qureshi, Shubhi Verma, Ragini Saxena and Manish Shrivastava
LNCT Bhopal

Abstract

Every year hundreds of students from various colleges take campus recruitment test. This test is organized by a huge number of companies who are in search for dexterous and talented students to recruit for their company. This process of handpicking each and every student suitable for a particular job profile can be a tedious process for both the students and the companies. Every company has a predefined eligibility criterion, students who are able to fulfill this eligibility criteria are only allowed to sit for the further recruitment process. This project is directed to resolve the problem of superfluous eligibility criteria, which makes this process decipherable and highly accessible. Since each company has its own eligibility criteria there are very high chances of them being redundant hence confusing the students. One striking solution for this redundancy is to compile the eligibility criteria of various organizations on a single portal that can be accessible by the students to check the number of companies in which they are eligible. This project is made keeping in mind that it provides solution from end to end.

Since the recruitment drive is a tedious drive we reduce the stress level by a notch, by just one click the students will know the companies in which they are eligible and can easily start preparing for the further levels. This will give the preparation of the students a kick-start. The project is helpful for the companies as well because this portal will provide them with a clear view of the number of students who are eligible for the company and other personal details of the students, which it can use for further indications.

Keywords

Student campus eligibility portal, PL/SQL project.

1.Introduction

The objective is to learn and explore Oracle Database XE. And play the role of DBA as Oracle Database XE providesinstallation and configuration to minimal so we can concentrate on development, and in terms of configuration, we are in complete control. With the admin control in Oracle Application Express (formerly HTML DB) we can create multiple users with varying levels of permissions. Or, use SQL to create users, roles, and profiles. The amount of time spend in configuration and other DBA tasks is entirely up to us. Oracle Database XE is ready for application development out of the box and will help focus on learning the development and process of the required project problem.
The application contains following functionality:

1. Enter and Maintain student details
2. Enter and Maintain company details
3. Enter and maintain selection criteria
4. Insertion and Updating at administrator and user level
5. Percentage and Age Calculation
6. Function for checking through selection criteria

2.Literature survey

PL/SQL is used as programming language to implement and test the application. TOAD is used for creating tables using SQL. Edit Plus is used for writing the code using PL/SQL. The design of an application that uses an Oracle Database for persistence needs to address these main challenges: the specification of the business functions that it must perform, and the requirements for the information model that these imply; how the end-user chooses between business functions, provides facts that drive them, and sees the effects they have; and how the effects of the business functions are persisted and retrieved. It goes without saying that the application will be valueless unless only correct and complete data is persisted and retrial exactly honors the request. PL/SQL's purpose is to enable the correct and efficient implementation of the business functions and the persistence and retrieval of their effects. While SQL famously provides an excellent scheme to express persistence and retrieval declaratively, it is equally famously unable to express higher level business logic. To choose between possibly radically different courses of action, according to currently available facts, requires programming in a good old if... then... else language. PL/SQL meets its purpose by allowing select, insert, update, delete, commit, and llback statements, using genuine SQL syntax, among the classical procedural statements that its parent, Ada, gave it. In PL/SQL, therefore, a SQL statement can be seen as a special kind of subprogram. It's common to lead with concerns about performance; but it would be meaningless to try to improve the performance of an incorrect application.

Correctness must first be established; and only then, may performance be considered.

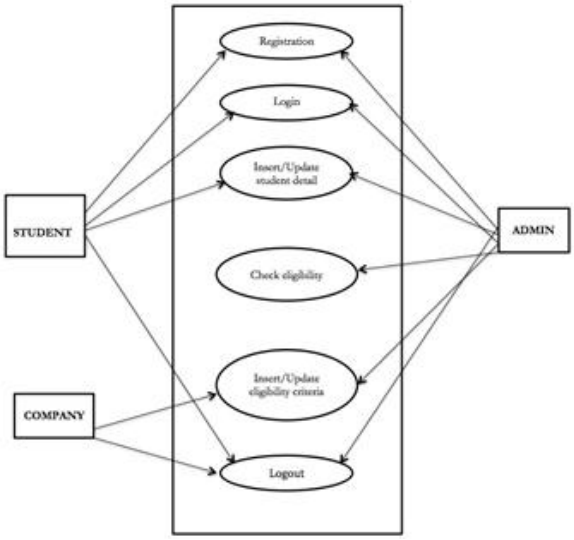
3.Working

Students are required to sign up with the portal and construct a profile that consists of information about the students (e.g. marks in 10th current backlog etc.) , similarly the administrator fills the eligibility criteria for the company (e.g. work experience, minimum academic criteria. etc.). Criteria as specified by the company can be updated easily by either the administrator or the company representative. We have used abstraction for the easy insertion and updating of the student eligibility criteria/

The system will maintain student information such as grades, courses completed, year gaps etc. All this student information will be uploaded by the administrator and will be used for checking the criteria for eligibility for a company after verification by the placement cell. Association of both the details will give a result, which will enable the students to know the companies in which they are eligible. Here almost all work is computerized and fed into our Portal for easy access and automation for both Students and the companies. So, the accuracy is maintained. Maintaining backup is also very easy. It can be done within a few minutes. Our system has two types of accessing modes, administrator and user. Student eligibility Portal is managed by an administrator. It is the job of the administrator to insert update and monitor the whole process. When a user logs in to the system. He/she would only view a home page where after logging in they can enter their id and check for their eligibility. He/she can't perform any changes.

Various tables and multiple criteria is set up in order to make the system result accurate. This will help the students to know easily their eligibility for various companies and consequently apply in them. The project is created using Oracle PL/SQL which is a faster more reliable and secure development tool than its peers. The project based on the training is created for recruiters to be able to filter through candidates in a really fast and efficient manner. As PL/SQL gives high productivity to programmers we used it in our project as it can query, transform, and update data in a database. In this fast paced world we need our software to run upon a reliable set of hardware and a software which runs smoothly without hiccups making complete use of this hardware setup. We know that PL/SQL saves time on design and debugging by strong features, such as exception handling, encapsulation, data hiding, and object-oriented data types.

4.Flow diagram



5.About application

Hardware requirements needed for the project are as follows:

- A minimum 512MB RAM is required.
- OS Required is at least a Pentium 4 processor
- T.O.A.D for Oracle is required as Tool for racle Application Development.
- Edit Plus , and
- Command Line

Toad for Oracle is a database development and management toolset. TOAD reduces the time and effort that developers and DBAs spend on daily tasks. It helps save time and also reduces risks with the leading Oracle database development and is an optimization software tool, as ranked by IDC.
Only Toad empowers you to:

Implement processes that are consistent and repeatable, supporting agile DB development.

- Accelerate application delivery, while minimizing risks that are associated with database changes.
- Ensure functional accuracy and also scalability with automated testing.
- Quickly pinpoint and resolve database performance inefficiencies.

- It helps automate SQL optimization.

6. Limitations

The first limitation in the project due to oracle 10 g is memory—Oracle Database XE can address only 1GB of RAM. But it is to be considered that the relative rarity of machines that offer 1GB of memory (especially in small businesses), this limitation mainly affects how many users can access the database concurrently and, to a certain degree, how well it can perform when those limits are hit beyond threshold. For most purposes Oracle Database XE will be deployed to a single user desktop or for a small workgroup server, so in this respect 1GB is more than enough.

The second limitation is that XE will only use one processor at a time. That does not mean that it won't multi-task or that it can only perform a single function at a time. instead, XE will run on a computer with more than one CPU, it just won't scale up to use those CPUs as it will only be using one CPU at a time. For that functionality, for multiprocessing, you need to purchase Oracle Database Standard Edition or Enterprise Edition. Again, for the uses discussed here, one CPU is more than enough.

The third limitation is that only a single XE database can run on any given computer or desktop. The important point here is that you don't need a database for each application you create so a single XE database suffice, as you might for some competing databases. Instead, Oracle uses the concept of schemas to separate applications from each other.

Finally, a 4GB limitation is there on the disk space—which on its face appears to be serious limitation as such. However, 4GB is a huge amount of storage for most of the applications. Sure, compared to a multi-terabyte data warehouse, 4GB seems to be small—but in reality it's hardly that, and it’s enough for most of them.

7.Conclusion and future work

The best part of our review is that we have studied and found that both front end and back end both using the Oracle SQL and PL/SQl and hence the maintenance of the application is very easy because only database developer can handle both Front End and Database part of the application and this leds to low maintenance cost in future. We have used Oracle 10g Express Edition Database to develop this application because it is free to develop, deploy, and distribute, and this makes our application very cost effective for small schools small libraries

Scope of PL/SQL developers:
You can be working on the back end part, writing queries, stored procedures. This might be helpful where applications directly talk to the database. If the application uses an ORM like Hibernate, the scope would be less.

You could be mapped as a DBA later, working on creating tables, users, roles, permissions.

You would be having scope to work on the performance tuning part, as generally most applications have issues with the PL/SQL stored procedures. Our application can also be used to create resumes in future. This application can also be further extended for the use of companies so that during the placement time they can use it as their online placement cell and us the same database to find out the students eligible for their company and directly contact those student.

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