Design and Implementation of Software Outsourcing Talent Training Public Service Platform

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Abstract—In recent years, there is a rapid development in the software outsourcing industry. The most important problem we currently need to solve is talent shortage. So, it is very necessary for us to build up a platform, which focus on training software outsourcing talent. We provide a platform to contact the government, university, enterprise and professional training institutions together. This platform can improve the scale and quality greatly.

Key words—Software outsourcing, Web Services, Public service platform.

I.INTRODUCTION

Software outsourcing is a high-tech, high human capital, high value-added, high international level, low resource consumption, low environmental pollution, high-end trade in services. With the adjustment of the word industrial structure, the continuous deepening of the world market in various fields, to promote the various types of software outsourcing gradually become the region to undertake the world industry professional new industry model. In the global, it set off the wave of information revolution to the regional economic development has brought new growth points, new ideas. Nowadays, China's IT industry is in high-speed development, the development of software outsourcing industry is also in a positive, vigorous development stage. Although the development of China's higher education has cultivated a large number of IT-related professional graduates, the number of the talent who are really suitable for the software service outsourcing industry is extremely short. In the other hand, many professional training institutions have cultivated the workers and lack of sufficient theoretical basis, prone to professional bottlenecks.

Users in our platform include individual users and group users. Individual users are mainly tourists, students, teachers, platform managers, the application administrator. Group users include outsourced companies, outsourced training structures and government.

II.STRUCTURE

A.System Structure

The system uses B/S structure, .NET platform, based on Asp.net MVC framework, using C# language development. Web server using IIS, streaming media server for Flash Media Server (referred to as FMS), the database selection Microsoft SQL Server.

The platform uses MVC-based architecture. Multi-tier architecture is the development of three-tier structure, the system will be divided into layers, contribute to the system framework
clear. In addition, multi-level architecture contribute to the security of the system Figure 2.

- Business logic layer (BLL): for specific issues, it can be said that the operation of the data layer, the data business logic processing.
- Data Access Layer (DAL): This level of affairs directly to the operation of the database, for data added, delete, modify, update, find and so on.
- UI: Introduced Asp.net MVC framework, the UI layer is once again layered into 3 layers, divided into the controller, view, the entity three parts. The controller completes the page logic, renders the view layer with the entity and talks directly to the BLL in the three layers; the entity here is the re-encapsulation of the database layer ORM. Asp.net MVC in the View layer can be HTML form, Flash form, Silverlight form, and even the application.

MVC requires application layering, although it takes extra work, the product structure is clear, the application of the product can be better reflected by the model, because the different layers of their duties, each layer of different applications with some The same characteristics, is conducive to engineering, tooling to generate management program code.\(^4\)

View layer and Controller layer data interaction mode changes, the entire project will be based on xml or json interaction, rather than the previous html. This allows the presentation layer to be diversified and easy to maintain, meaning that every interaction is done in the form of Ajax or Flash or Silverlight.

**B. User organizational structure**

The platform user is organized in user groups, and the user group can be an outsourcing enterprise, an outsourcing training organization, a government, or even a user-defined group. As Figure 3

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**Figure 2 System Structure**

**Figure 3 UserGroupStructure**

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**III. FUNCTION MODULE**

**A. Open Platform**

The goal of the open platform is to build a platform that is very easy to scale out.

In addition, Third-party development of a large number of applications may be attracted by the rich resources of the platform. They will integrated their applications and put it on the platform. It make the platform more colorful.

Platform for the extended application to provide user base information, user organization information, resources, basic services, so that the application can Rely on the platform to run, and reduce the cost of advertising to attract users. Platform for developers to provide a separate system, you can achieve the deployment of applications, test applications, maintenance applications, statistical earnings, user and other functions.

Open platform infrastructure through the iframe, the third party will be embedded int he application. the user access to the application page, which can be deployed in the platform to provide the application server can also be
deployed on third-party servers.

B. Training and learning management

- Course designer management

  This module mainly implements the management of general course resources, including the management of curriculum catalog, hierarchical management of curriculum resources, question bank management, job management, project management and so on. After the course designer logs in, they can see their own training institutions, new courses, existing training courses, information from virtual schools and system platforms. The course designer can click on the "New Course" to add a new training course and click on an existing course to maintain an existing course resource.

- Course catalog management

  The curriculum catalog management, all the curriculum resources are in accordance with the directory hierarchical management, curriculum designers can design their own directory structure, and according to the directory classification to create maintenance course resources. The setting and maintenance of the course resources supports up to three levels of catalog, the first level directory is the course name, the name of the secondary directory is entered by the teacher, such as class, week, unit test, test or other (system default is class). In the secondary directory can create a three-level directory, three-level directory name is also entered by the teacher (the system defaults to the task). Designers can also modify and delete directories that have been created, as well as directory order adjustments.

- Course Resource Management

  Course resource management is based on the directory organization. What belong to a directory of resources is created in the corresponding directory, such as teaching syllabus, teaching progress templates, e-books, reference resources can not be subdivided in the sub-directory resources at the curriculum level Directory created, and PPT, video, FAQ knowledge points and other items can be refined in the subordinate directory entry.

  Resources at all levels of the directory using a common form of input, divided into four blocks to the tabbed way. The first is an overview, the second is the knowledge point, the third is the teaching resources. In different directories, you can create different content as needed. Assuming that the third level of the directory is built by default, the teacher can enter different information according to the different directories to which the resource belongs in the overview, knowledge, and teaching resources. In the course-level catalog, the course can be summarized in the overview, including the course use, software environment, teaching methods, scoring methods, programming language and other designers think it is necessary to provide students with curriculum information, list the key points of knowledge needed for the course. Teachers can upload teaching syllabus, teaching progress template, e-books, reference materials and other teaching resources by the provided multimedia editor in the teaching resources area. In the second class directory, you can summarize the lesson in the overview, including the learning objectives, key points, difficult points and other related information. In the task category 3 directory, you can summarize the task in the overview, including task description, guide text and reference materials, training steps, test data, the completion results of the task-related information. It lists the key points in the knowledge points. Also, teachers use provided multimedia editor to upload video presentations and other teaching resources in the region.

IV. Conclusion

In this paper, we present a platform implements a platform for the various relationships of people who outsource the training, and provide the corresponding applications to meet the needs of various identities. The platform enables the coordination between individual user classes and group user classes in different group roles, facilitating the management of people and courses. This platform provide the public service for talent training and get good results.

REFERENCE
