Архитектура ВМ в реализованном сценарии выглядит следующим образом:

1. В качестве операционной системы использован облегченный образ Windows 10.

2. В качестве СУБД будет выступать PostgreSQL, которая развёрнута на системном разделе в виде SQL-сервера и клиента администратора для редактирования БД на прямую.

3. «Галактика ERP» развёрнута в системном разделе наряду с сервером БД.

Результаты выполненной студентами работы сохраняются либо на личных накопителях данных, либо данные можно сохранить в личной папке на ВМ или на физической машине. При использовании данного сценария реализации решения каждый студент будет использовать личную базу данных, располагающуюся на ВМ наряду с используемой ERP-системой.

Благодаря использованию предложенной технологии существенно упрощается администрирование ERP-приложений для учебного процесса.

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RESEARCH ON DIGITAL CAMPUS INFORMATION SERVICE SYSTEM BASED ON CRM CONCEPT

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In the era of "customer-centred" economy, this paper introduces customer relationship management, which is widely used by enterprises, into higher vocational institutions, updates the concept of higher vocational education, restructures business, allocates teaching resources reasonably, makes "customer satisfaction" and "customer loyalty," and effectively improves the core competitiveness of higher vocational institutions.

There are many problems, such as the mismatch between majors and courses and the needs of society, the unreasonable allocation of teaching resources, the lack of management of student services, the existence of "I want to learn", a single learning model, asymmetrical information about the supply and demand of talents, the lack of

services for employers, the need to further improve the motivation and creativity of teaching staff, etc. In the era of "customer-centred" economy, this paper introduces customer relationship management, which is widely used by enterprises, into schools, updates the concept of contemporary education, reorganises business, allocates teaching resources rationally, makes "customer satisfaction" and "customer loyalty". This effectively enhances the core competencies of the school, adds value to the school brand, optimises management effectiveness, motivates students, teachers and staff, and brings the campus into line with the business and marketplace. Customer Relationship Management (CRM) originated in the early 1980s as "contact management", which was dedicated to collecting and collating all information about customer contact with the company. In the early 1990s it evolved into CustomerCare, which included a call centre and support for data analysis.

Customers and their relationships in the school CRM. Social enterprises, candidates or parents, students and teachers are all customers of the school and are one of the most important resources for the development of higher education institutions. The relationship between the college and the employer is that the college recommends its product - the student - to the employer, and the social enterprise recruits the college's graduates, which means that it uses the college's product, and at the same time, the college adjusts its majors and courses according to the requirements of the employer or the employer's evaluation of the "product".

The school adjusts its programmes and courses according to the requirements of the employer or the evaluation of the "product" by the employer. The relationship between the School and the candidates and parents is that the School advertises its brand and products to the candidates and parents, who apply for admission; the relationship between the School and the students is that the students take the School's majors and courses, and the School manages the students' registrations and comprehensive evaluations. The relationship between the school and its internal staff is that the school employs staff as teachers and is an important human resource for the development of the school, and the college has to manage and motivate the staff; the staff work in the school and teach on the platform provided by the college. Therefore, the CRM management system of the campus should have a wealth of customer information resources and be able to manage the various relationships that occur between the school and its customers.
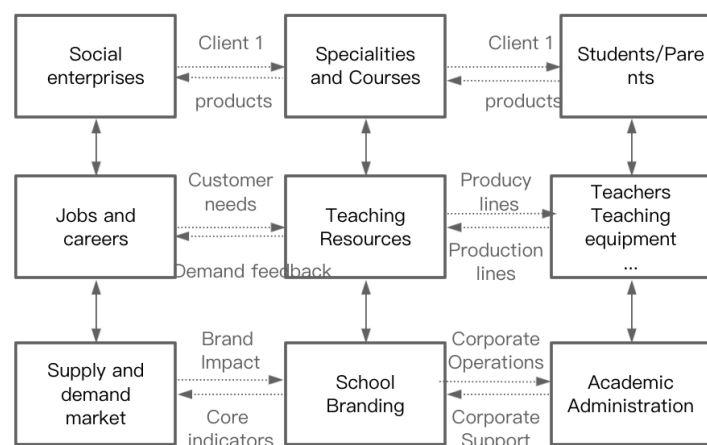

Figure 1 – CRM management system
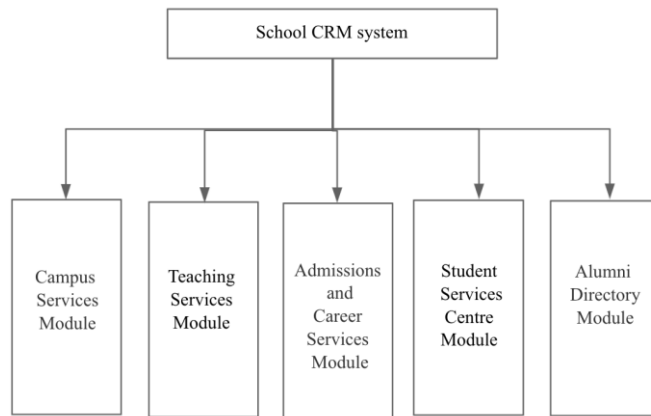
Figure 2 – Functional modules of CRM in higher education institutions

According to the analysis of CRM function in higher vocational institutions, CRM mainly consists of campus service module, teaching service module, recruitment and employment service module, student service centre module and alumni record module. The CRM system in higher vocational institutions should be able to achieve comprehensive management of teaching, campus services, enrollment and employment, etc. It can import, add or modify customer data, classify customers, analyze customer demand data and study market trends by using data mining and other tools, and realize automation of various business processes and online services.
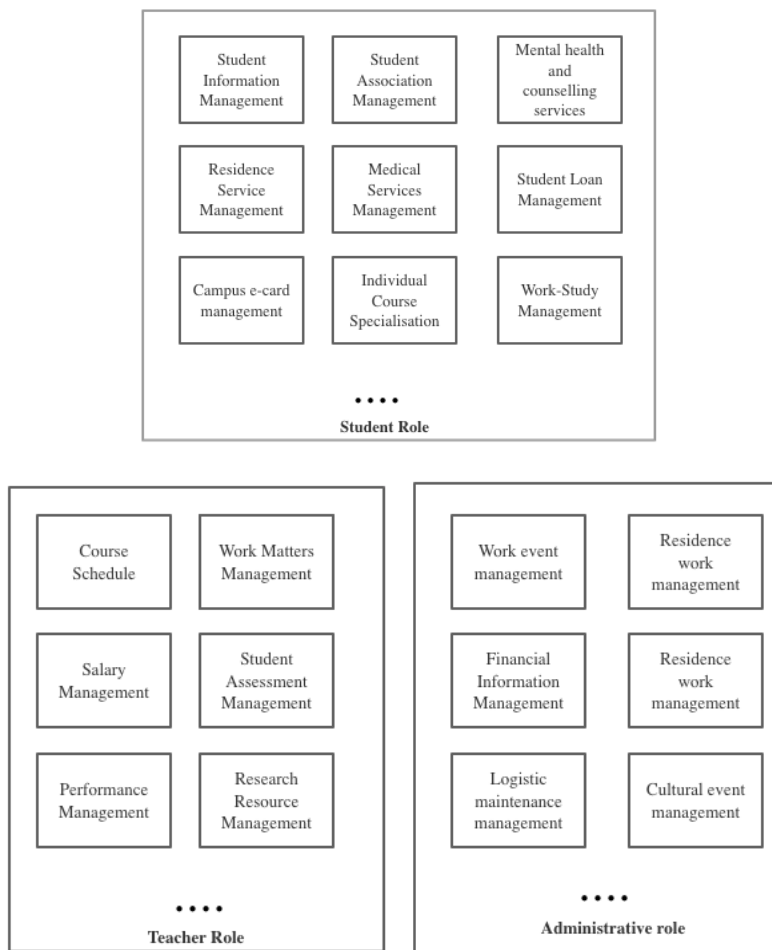
Figure 3 – Architecture of the Campus Services Module

Campus Services Module. The Campus Services module provides self-service and one-stop services for customers, including dormitory management and services, IC card management services, club management and services, medical management and services, mental health and counselling services, network management and services, loan and work-study management and services, and one-stop office services. Students, candidates, parents, staff, employers and visitors can each access the information and services they need in the campus services system, while keeping critical and important information securely protected.

Enrolment and employment module. This module is composed of two modules: admissions and employment. Candidates become students when they apply for admission, and students become graduates when they have completed a course of study and passed the relevant grades.

This process is the life cycle of the student. One of the functions of the Admissions and Careers module is to manage the life cycle of students, so that parents are assured that their children are coming to study and live at the school, candidates are confident that they are coming to study at the school, students are at ease with their studies, and graduates are employed or start their own businesses. Graduates are the products of the school, and when employers recruit graduates, they buy the products of the school, and their attitude, performance, ability and value are the value of the products cultivated by the school. If the employers are satisfied, they will form "customer loyalty" and will often come to the school to recruit graduates, and some of them will also promote and introduce other employers to the school to recruit graduates.

The same applies to "satisfied customers". The graduates will then pass on the school's teaching standards to their friends and family, and as word spreads, more candidates will apply to the school, and the quality of the candidates will be higher, and the school will produce better quality graduates. At the same time, the graduates will become alumni, and the alumni will know our school better, so they will recommend work units or their own companies to go back to their alma mater to recruit graduates; they will also choose to go back to their alma mater for further study and education according to their needs. This is a virtuous circle.

Customer service centre module. The module is mainly is a platform for communication between the school and candidates, parents, students, employers, staff and visitors, and can be used for communication, contact, enquiry, complaint, application and other matters through various tools such as Web, E-Mail, telephone, fax, SMS, forum, BBS, message board, video, letter and face-to-face. It also provides a key channel for the school to collect customer information and understand customer needs.

The Customer Service Centre module is the school's focal point for reflecting customer needs to the relevant departments for processing and response. The Customer Service Centre is a humanised service for the school, providing regular or occasional customer care, making customers feel welcome and satisfied with the school's services, and maintaining customer loyalty.

Conclusion. The management of education in schools is a complex and timeless subject, as schools are educational institutions where students learn and receive their education, which affects their lives and their contribution to society. In schools, the

philosophy of education should be changed so that all school work is 'customer focused' and 'customer satisfaction' is the aim; in higher education institutions, all school-customer relationships should be managed systematically so that the customer is one of the most important resources of the school.

The system is designed to manage and serve the whole process from candidates to graduates to alumni, and to manage the life cycle of students; to improve the efficiency of management, reduce management costs, improve the automation of management and services, and reduce the workload of staff; to classify, summarise and analyse data from the system, and to find rules and regulations to provide a basis for scientific and rational decision-making in schools. As schools pay more attention to their customers, the market demands are stronger, information technology is more mature, and schools are well equipped to implement it, CRM in higher education institutions is bound to flourish.

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СОВРЕМЕННЫЕ СРЕДСТВА ПРЕДСТАВЛЕНИЯ ИНФОРМАЦИОННОГО КОНТЕНТА

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This article discusses modern ways of distributing information content, modern elements of the media sphere, the main trends in the development of the media, the most popular domestic and foreign media resources and the main specifics of their work.

Эпоха активного развития компьютерных технологий и проникновения интернета во все сферы общественной жизни увеличило потребность человека в информационном контенте. Информационный контент – информация в любом виде, которая дает исчерпывающий ответ на вопрос пользователя или рассказывает о чем-то.

Современные средства массовой информации (СМИ) появились в социальных сетях практически одновременно с началом роста популярности таких социальных сетей, как Вконтакте, Twitter, Одноклассники. Такие изменения по-