Development of a Web System to control services provided by the Service Center for Students with Specific Needs

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Abstract
The purpose of this article is to develop a web system that allows automated control of the services provided by the Center for Assistance to People with Specific Needs on the campus of Forianópolis city, thus enabling a more accurate monitoring of students who need this service, as well as keeping a history of all the calls. This history will enable a detailed analysis of the evolution of each case, contributing to improve the quality of the service provided to the internal community.To develop this system was used as programming language PHP, CSS and HTML. The MySql Database Management System was used to store the information.
Keywords: Students with Specific Needs, Web System, PHP Language.

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I. INTRODUCTION

According to the latest Census of Brazilian Institute of Geography and Statistics[1], a quarter of the Brazilian population has some type of disability. The number represents about 45 million people who, like the others, need to be included in the social environment[6]. In this scenario, welcoming students with disabilities becomes an important task for the institution, requiring the preparation of the entire team (teachers, pedagogical coordinators and direction). It is important that these students feel welcomed and that they are monitored during the period they are at the institution. This monitoring can become a differential in your process of adaptation and permanence in the course, as the professionals who have contact with this student will be provided with information so that they can perform their work in the best possible way.

Therefore, the service provided by Center for Assistance to People with Specific Needs is the flagship for this process to be successful, however, a tool is needed that enables an automated control of these services in order to facilitate the monitoring of each case and check its progress.

A web system makes it possible to meet this need because it will be developed with technologies to be studied, such as the Java language[3] with a programming environment[4] The data will be stored in a relational DBMS such as Mysql[2] allowing all the information about the services to be available whenever the user needs it.

II. METHODOLOGY

The methodology used in the development of this work was divided into two steps which are detailed below.

1. **Survey and specification of system requirements:** Develop a requirements document that is the contract between the development team and the customer. It is the moment when the characteristics and functionalities of the system are defined. To carry out the survey of system requirements, a questionnaire was prepared using the google forms tool. This questionnaire sent to those responsible for the care of students with special needs. Subsequently, the use case diagram was prepared to better understand the system requirements

2. **Modeling and building the Database:** Make use of Unified Modeling Language (UML)[7] entity relationship diagrams for modeling and building the knowledge base and data storage structure. Database modeling was performed in the Mysql workbench tool.

III. RESULT AND DISCUSSION

The results obtained are as discussed below.

Use Case Diagram

The development of this work was based on 3 use cases defined in the requirements gathering. Register student, schedule attendance and generate reports.

- **Register Student:** registration of students in the system with the information name, date of birth, course, contacts telephone and email, address, year of admission, type of admission, condition presented (if disability, autistic spectrum disorder, high abilities), if it participates in the specialized educational service and the frequency (weekly, biweekly), assistive technology resources used.
- **Schedule Attendance:** Enable in each registration, the option to schedule service. How: Date, time, topics that will be evaluated in the service, responsible. User can mark, redial and cancel.
- **Generate Reports:** Enable the collection of quantitative data regarding the students served, types of assistance, frequency of care, time spent in care, how much work the student generate and lists of deficiencies.

The use case diagram elaborated in this work based on requirements gathering can be seen in Figure 1.
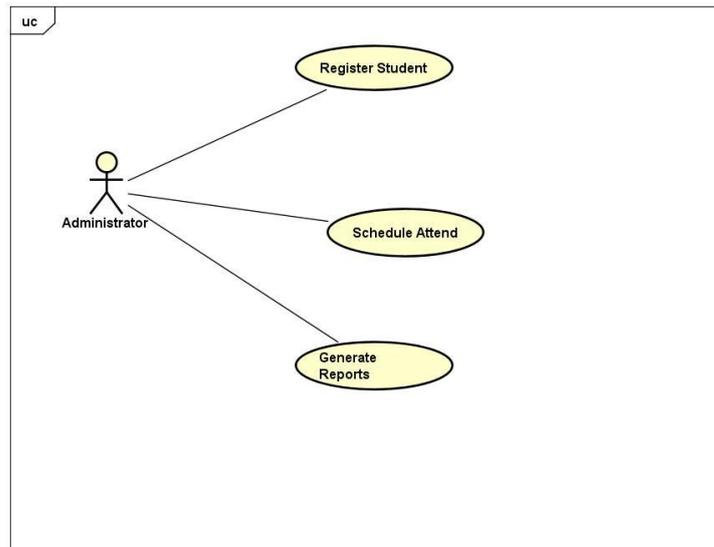
Figure 1: Use Case Diagram

Database

The database modeling used in the development of the web system presents 5 tables which are described below:

- **user:** the user table is responsible for keeping the information of the users who will have access to the system to make appointments and appointments.
- **Attend:** the scheduling table is responsible for storing the user who scheduled the service, the date and time, as well as the student who will be attended.
- **Student:** this table will be responsible for storing all the information regarding the student.
- **student_has_especificNeeds:** this table will be responsible for storing the student and his specific need. The student may have more than one specific need.
- **SpecificNeeds:** this table will be responsible for storing all the specific needs addressed by the institution's professionals.

Importantly, the database model was developed using the mysql workbench tool. This model was validated with the group that will be responsible for using the web system developed here. The database model is shown in Figure 2.
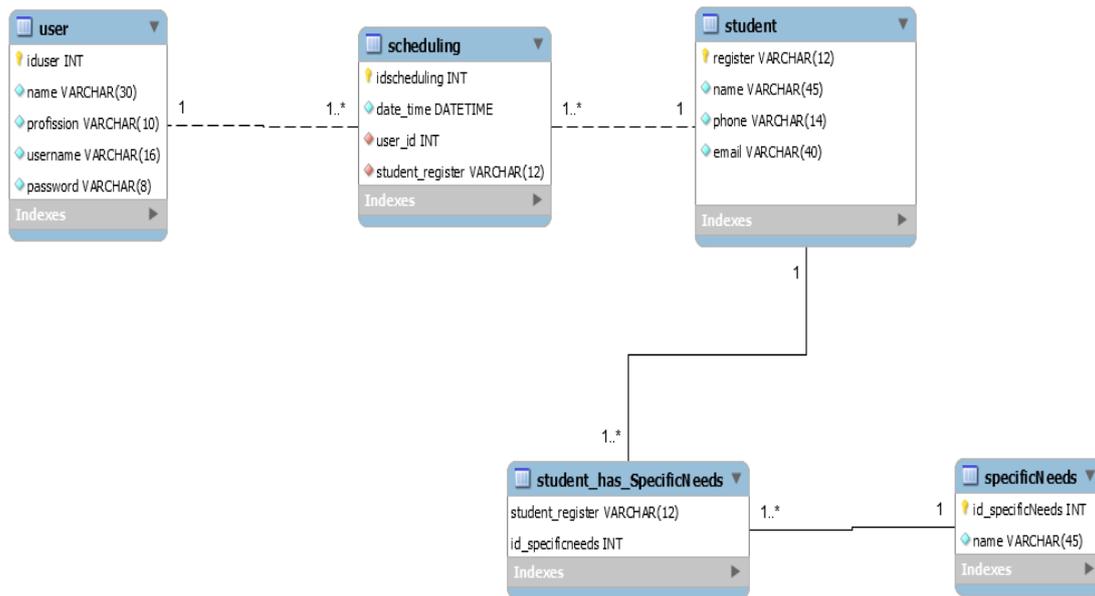
Figure 2: Database model

Web System
  The interface screens of the web system developed will be presented below. Figure 3 shows the login screen to access the system. Figure 4 shows the main menu of the system with the functionalities of registering user, scheduling and student and Figure 5, on the other hand, shows the student registration screen that is presented when the user chooses the option to register student in the main menu. We also have the option to print user reports, schedules and students

Figure 3: Login
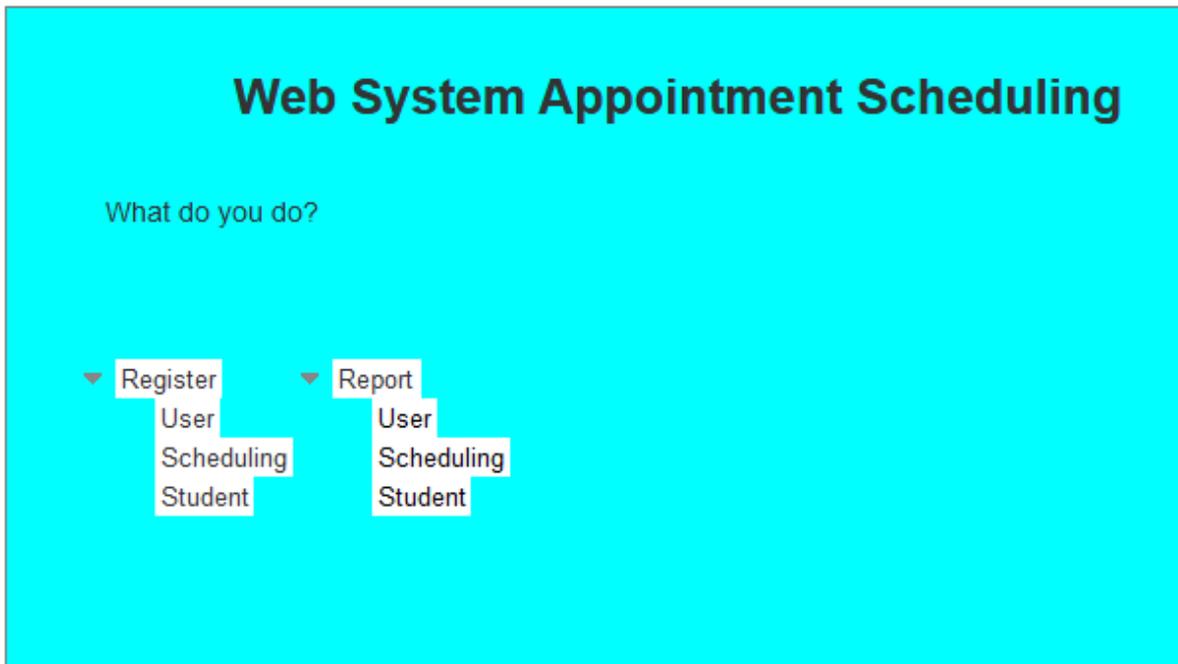
Figure 4: Main menu of the system
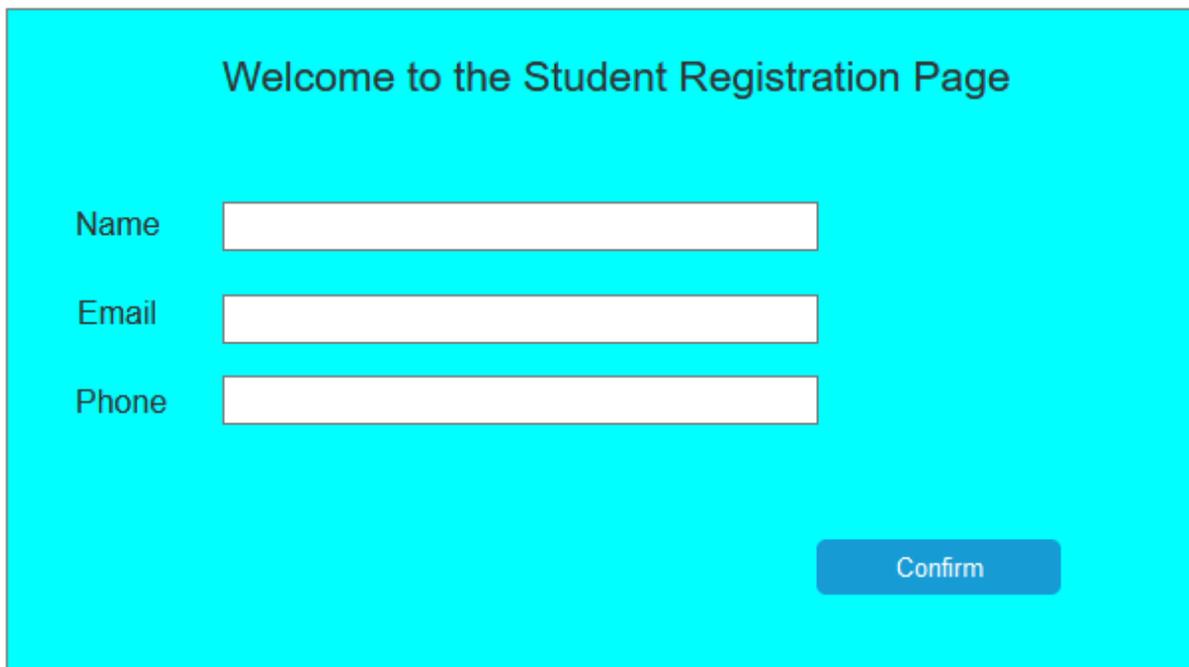
Figure 5: Student Register

IV. CONCLUSION

This work aims to automate a process that until then was done manually through the use of electronic spreadsheets. The web system developed allows the user to register students, the specific needs of each student, facilitating the scheduling of appointments performed by professionals. The automation of this process minimizes errors as all interested parties will be able to consult the agenda that will be made available in the future by the system. It will still be necessary to carry out more tests to verify the reliability of the system, especially with regard to scheduling, which is the most critical part of the system. For this reason, the initial prototype will be refined so that it can fully meet the needs understood in the requirements gathering.

ACKNOWLEDGES

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