Polytechnic University of Puerto Rico

Electrical & Computer Engineering and Computer Science Department

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CECS 4204

Software Engineering

Individual logbook

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9/3/11

The problem that I propose was the inefficiency of the searching of patient’s records, which cause a delay in the treatment or care of the patient when visiting other medical institutions where your head doctor does not work. An example of this problem is if a patient have multiple conditions and it is an emergency and the doctors attending to the patients does not know the conditions that the patient have the treatment or care would be delayed putting in risk the patient‘s life. All the other problems my partners presented were discussed and everyone vote to have the four problems in order depending on the votes.

16/3/11

The problem selected was the inefficiency and “user-friendliness “of the course enrollment. One sub-problem that I found was on the validation of the course enrollment process there is no option to have parking access and no option to say if you have or have not a medical plan. Other problems discussed were the Fail to validate payment options (scholarships and loans), Fail to validate course from taken courses, The course search-engine requires to be very specific with searched for course (Cap sensitive, no use of like parameters), The system fails to update course status, Should offer special topic and electives and Courses need to have a full description. After decomposing our problem we decided to talk about group problems and what could go wrong. Also the name of the group was discussed and the name that everyone agreed on was Astrapi Techonology.

21/3/11

The logo that everyone selected for the group was the pi symbol with a lightning bolt behind it and the design was made by Gabriel. We discussed the name of the software. The names mentioned were Easy Enrollment, Auto-Enroller and Click n Enroll. Also the logo for the software was discussed. The prototype of the logo was a robot with a roll of paper. The roll of paper will be on the hand or from the torso of the robot. But the design is not decided. The meeting was short because we discussed the name of the software for too long.

1/4/11

We began writing the Use Cases of the actual system.

1. First the student log on to my poly.

2. Validate the user and give permisions.

3. User goes to registration section of the web site.

4. System validates if the user can enroll in that moment

5. user needs the curriculum of a list of course to register.

6. User manually searches for each course, user course code or course name.

7. The system will return the results of the search.

8. The user will select a course to enroll.

9. System validates the course see if there is no conflict.

10. If the user can enroll the system will enroll the course. If not the system will reject the registration. This includes returning error messages.

11. If the user course was enrolled then user will search for the next course and repeats the step 8 until the student is done Else if the system rejects the students’ needs to select another option assuming the student has the requirements.

12. Once user is done then user will click on generate statement.

13. The system will generate the statement for the enrolled courses, this includes any debts.

14. The system will let the student pay for the enrolled courses using the following options: scholarships, loans, credit card and ATM.

6/04/2011

We discuss more in depth the user cases of our system. It was decided that our system will only allow the student to registrate the courses. Other functions like paying and the feature that allows the professors to use our system will be implemented in the future. Our system will only have a user (student) not the professor or administrator.

Since section 1 of the SRS was done, we divide the rest of the SRS between the 5 members of Astrapi.

Division of work:

1. Emanuel – Sections 3.3, 3.4 and 3.5
   1. 3.3: Performance requirements
   2. 3.4: Logical Database Requirements
   3. 3.5: Design Constraints
2. Luis – Sections 3.1 and 3.2
   1. 3.1: External Interface
   2. 3.2 Function
3. Francisco – Section 3.6
   1. Software system attributes.
4. Joaquin and Gabriel – Section 2 overall

It was divide with section 3 in mind because this section explain the requirements in a more detail way than in section 2. If section 3 was finish then section 2 would be easier because will explain the “same” that appears in section 3 but in less detail.

13/4/2011

The section that were assigned to me were :

* 1. 3.3: Performance requirements -

*Response time*

The minimum time the system will take to display the course that user can take for the next term is 2 seconds. Selecting a course for a term will have minimum time of 1 second. The system will have a minimum time of 3 seconds updating the database.

*Capacity*

The maximum number of courses a user can enroll in a term is 7 for an under-graduate user. The maximum number of users the system will handle at any given time should not be higher than 10000 to prevent any server crashes.

*Other Requirements*

The user needs to have the username and password that the institution gave to them if they want to use our system. Selecting course and updating will only be available at registration time. The student can enter at any time on the web-page to see the courses he can take for the next term but it cannot select any course

* 1. 3.4: Logical Database Requirements

3.4.1 Student Entity

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Type** | **Description** |
| Username | Varchar | Use for the log in function. |
| Password | Varchar | Use for the log in function. |
| Transcripts | Varchar | Courses taken by the student. |
| Curriculum | Varchar | All the courses, major and pre-requisites. |

3.4.2 DBMS Entity

|  |  |  |
| --- | --- | --- |
| **Attribute** | **Type** | **Description** |
|  |  |  |
| Transcripts | Varchar | The DBMS send it to AE to validate the course taken. |
| Curriculum | Varchar | The DBMS send it to AE to validate all the courses, major and pre-requisites. |
| Credentials | Varchar | The DBMS validates if the username and password exists. |

3.4.3 Relationship table

|  |  |  |  |
| --- | --- | --- | --- |
|  | DBMS | AE | Student |
| DBMS |  | Sends transcript and curriculum to. | Have information of. |
| AE | Send credentials of student to validate. Upgrade it. |  |  |
| Student |  | Use it to register. |  |

* 1. 3.5: Design Constraints –
  + *Hardware and Software limitations*
    - Processor Minimum: 233 MHz
    - Memory Minimum: 64 MB RAM
    - *OS Minimum: None (user can use any OS that can support Mozilla Firefox and/or Google Chrome)*
    - *Web browser: Mozilla Firefox or Google Chrome*
    - Internet connection with at least a speed of 1 kbps

* + *Languages needed for implementation*
    - PHP
    - MySQL

* + *Security*
    - HTTPS with Encrypted SSL and TSL connection features.

14/4/2011

After finishing the sections assigned yesterday then I was assigned sections 2.3 and 2.4

2.3: user characteristics - The user characteristics or skills are not too high. The user needs is to have experience in navigating the web. Our interface would be detailed enough to guide the user through all the steps.

2.4: Constraints :

* + *Hardware and Software limitations*
    - Processor Minimum: 233 MHz
    - Memory Minimum: 64 MB RAM
    - *OS Minimum: None (user can use any OS that can support Mozilla Firefox and/or Google Chrome)*
    - *Web browser: Mozilla Firefox or Google Chrome*
    - Internet connection with at least a speed of 1 kbps

* + *Languages needed for implementation*
    - PHP
    - MySQL

* + *Security*
    - HTTPS with Encrypted SSL and TSL connection features.

* + *Others*
    - Depends on the database that the institution uses.

Also I helped in translating the work that Luis fo because it was in Spanish.

17/4/2011

The sections assigned to me were finished and a new assignment was assign. My new assignment was to do the SRS presentation. The SRS presentation have the most important things of the SRS document, like the purpose, scope, all the system interfaces, functions assumptions, dependencies and constraints.

19/4/2011

I write the introduction of the SDD (section 1.0) and STD. Also make a draft of the possible tests using the user cases from the SRS.

21/4/2011

Write a first draft of the test plan, Test Design Specification and Test Description. Since the IEEE manual is not very clear I decide to use the format that the professor explained and have on his course notes.

4/5/2011

After Joaquin continues to make more diagrams the testing began to be more clearer than depending on the user cases and functions described on the SRS.

22/5/2011

The function access page changed name to homepage.

The function display course and create list become Show courses that is one part of function Enroll.

The function Enrolled In is added.

The function logout is added.

25/5/2011

I write Perfomance testing :

* Stress
* Load
* Endurance
* Spike
* Scalability
* Isolation

Conditions for test 5, 3, 7 and 9 were change to integrate some performance tests.