Software Requirements Specification

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Test Reservation System

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CEN4020

Homework #2

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**I. Introduction**

This section gives a scope description and overview of everything included in this SRS document. Also, the purpose for this document is described and a list of abbreviations and definitions is provided.

**i. Purpose**

The purpose of University Testing Center is to provide test registration and administration services for students and faculty at Florida State University that permits the University Testing Center to allocate the UTC resources to. Sites are located across the country, and one site is located on the main campus of the University.

**ii. Scope of the System Specified**

The University Testing Center strives to ensure that all tests are administered under standardized conditions that are efficient, fair, and secure, while providing examinees with the utmost level of student-friendly service that allows each the opportunity to demonstrate his/her ability and provide comparable results.

Faculty members can submit exams to the testing center, to be given to students. The examinations are currently hand-delivered to the testing center, on paper. The tests must be kept secure so the students who have registered to take each exam can only see them during the time they are available and only.

Students can register for exams/tests through telephone or Internet. Once the registration process for an examination is completed, the test administration staff identifies the list of examinees for a particular test day and makes necessary arrangements for administering the tests for that day. Distance students can take the exams at test centers located near where they live.

The University Testing Center needs to provide information about various tests and the test dates to the students. The testing center is also responsible for notifying students about any change in a test schedule.

**iii. Definitions, Acronyms, and Abbreviations**

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| **Term** | **Definition, Acronym, or Abbreviation** |
| CLA | Collegiate Learning Assessment |
| CLEP | College Level Examination Program |
| TEAS | Test of Essential Academic Skills |
| TOEFL | Test of English as a Foreign Language |
| SCOOTERS | Student Campus Online Test and Evaluation Reservation Center |
| SDRC | Student Disability Resource Center |
| FSUID | Florida State University Identification |
| UTC | University Testing Center |
| URL | Uniform Resource Language |

**iv. References to Supporting Documents**

* [ UniversityTestingCenter.docx](https://campus.fsu.edu/bbcswebdav/pid-7473939-dt-content-rid-43627058_2/xid-43627058_2)
* [ UniversityTestingCenterfunctionalRequirementsRubric.docx](https://campus.fsu.edu/bbcswebdav/pid-7473939-dt-content-rid-43627060_2/xid-43627060_2)
* [ UTCBaseLineRequirements.docx](https://campus.fsu.edu/bbcswebdav/pid-7473939-dt-content-rid-43627062_2/xid-43627062_2)

**v. Overview of rest of SRS**

Section II of the SRS describes the product in more detail. Section III provides a complete list of the functional requirements of the intended system. Section IV provides the non-functional requirements. Section V shows the class diagram, and Section VI the use case diagram. The appendices appear next.

**II. General Description**

**i. Product Perspective**

The SRS is a web-based system in which students can interact with a school testing center that allows them to sign up for test taking. The Test Reservation System (TRS) is a self-contained system. Users must have a valid FSUID and login using the authentication through the University.

**ii. Product Functions**

**System Administrators:**

* Login to the system using their FSUID
* Maintain the software and update versions of the software, utilities, database, and OS o Configure the system.
* Access all parts of the system for testing purposes.
* Can take on the privileges of Testing Center, Faculty, and Student roles

**Testing Center:**

* + Login to the System using their FSUID.
  + Maintain the inventory of resources of the Testing Center.
  + Maintain list of approved testing centers, resources, and contact information
  + Develop a draft test schedule for an upcoming semester and allow faculty to review and request changes.
  + Make a draft schedule official.
  + Make changes to an official schedule such as adding courses and tests.
  + Assign resources to faculty making requests to use the Testing Center for exams (date ranges, time ranges, and number of seats).
  + Prioritize requests from faculty.
  + Archive data from previous semester.
  + Setup scheduled for the coming terms.
  + Print off schedule for a given day, test, or class.
  + Testing Center role can assign Faculty member roles to users.
  + Testing Center can assume roles of Faculty and Students or individual faculty or student.
  + The Test Center can allow walk-ins for test if allowed by the faculty.
  + The Testing Center should be able to get a report on Testing Center Utilization by term
  + Resources dedicated to Department, Class, Faculty, and course
* Available resources (times and dates)

**Faculty:**

* Login into the System using their FSUID
* Request testing center resources for classes/sections for which they are listed on
* Blackboard as the instructor of record and no others.
* Register or unregister individual students for a class or test.
* Schedule a student for a class/ test or override an individual test schedule for a student.
* Cancel a test or change the name of the test.
* Check reservation status for all students in a class and test.
* Check reservation status for individual students.
* Faculty can assume roles of a student or individual student
* A faculty member will make request to use Testing Center Resources by providing the Testing Center with the following information for each test requested:
  + - Semester in which the test is requested (Fall, Spring, Summer A, B, or C Terms)
    - Name of the test (midterm, final, test 1, test 2, etc.)
    - Any specific requirements for the test (software, internet connection,
    - Blackboard access)
    - Course Prefix, number, and section of those taking the tests
    - Number of Students total
    - Range of Dates requested for each test
    - Range of times requested for each test
    - Number of seats required for each session

**Students:**

* Login into the system using their FSUID.
* Select a class for which they are registered.
* Select a test and select a day and time to take the test.
* Review their scheduled tests.
* Change or cancel or reservation.

**iii. User Characteristics**

There are four types of users that interact with the system, which are the System Administrators, the Testing Center, Students, and Faculty. Each of these four types of users has different use of the system so each possesses their own characteristics.

The System Administrator is responsible for maintaining the software, database, operating system, network, and configuration. Can have permissions to access all parts of the system for testing purposes.

The Testing Center users maintain the inventory of resources of the Testing Center, assign resources to faculty making requests to use the Testing Center for exams, prioritize requests from faculty, archive data from previous semester, setup scheduled for the coming terms, check reservation for students, override reservations for students, print off schedule for a given day, test, or class. Testing Center roles have all of the abilities of Faculty and Students. Testing Center role can assign Faculty member roles to users.

The Faculty can request computer based Testing Center resources to give a test. They can register or unregister individual students for a class or test, schedule a student for a class/ test or override an individual test schedule for a student. Also, they can cancel a test or change the name of the test. Note: A new test cannot be scheduled unless approved by the Testing Center.

A student can login into the system and select a class for which they are registered, select a test and select a day and time to take the test, review their scheduled tests, and change or cancel or reservation.

- All users are fluent in English and are otherwise unimpaired from using it.

- Student Users – High school graduates and college students with good computer skills.

- Faculty Users – College Graduates with good computer skills.

- Test Center personnel – College Graduates with good computer skills.

You needed to provide the basic characteristics of the classes of prospective users specifying their expected educational background and roughly the amount of product training those users are likely to require to fully utilize the TRS in accordance with their respective roles.

**iv. General Constraints**

TRS is an open source system that uses existing resources.

**v. Assumption, and Dependences**

1. Students enrolled in a class will have access to email and Internet.

2. Students will have a basic understanding of how to use a computer and access URLs over the Internet.

3. Students who are registered for classes that use the Test Reservation system will have access to the system and can see reservations for tests.

4. Students will not have to enter any personal information in the system (i.e. Last Name, First Name, Email address, classes) only login with their FSUID (email).

5. To email a student registered in the class you need to append @my.fsu.edu after their FSUID.

6. Tests are taken through the Blackboard System and students must login to their Course site under Blackboard.

7. Tests are password protected.

**III. Functional Requirements**

1. Faculty must identify which tests are allowed to be taken at the Test Reservation Center or the Student Disability Resource Center (SDRC).
2. Faculty can associate tests to specific sections of the class or assign the same test to all students in the class.
3. Faculty must set how many seats are available for students for each particular test session.
4. Each test will have a specific Location, Day, Time, Class, and Section.
5. A student my only have a reservation for a particular test once.
6. Only students authorized by the Instructor of Record of the class my elect to take a test either at the Test Reservation Center or the SDRC. They may change the location provided there are available slots.
7. The system should be designed to accommodate multiple testing locations for future expansion.
8. The number of seats per session can vary. In other words the Testing Center can vary the number of seats allocated to each course/section. The faculty in charge of the class may alter the number of seats available per testing session.
9. The number of seats set aside total for all tests must not exceed the number of seats available in the testing center for a given time.
10. Students may have multiple classes where tests are offered and each class may have multiple tests.
11. Students must login to the Test Reservation System using their FSUID and unique password.
12. Students may change their password.
13. There must be a mechanism to recover a lost password.
14. Students must register for a particular test in a particular class.
15. Students can choose a reservation by searching for a particular time/day or browse all times and days.
16. Students should get an email confirmation of their reservation
17. Students can change their reservation to a later or earlier date but cannot change it to a date/time prior to the current date/time.
18. Students can view their reservation and have a confirmation sent to their email address
19. When changing a reservation for a test, students can search or browse for a time first.
20. Makeup exams are clearly identified on the schedule and when a student signs up for a makeup exam they are flagged in the system.
21. Students are warned when making tests that are designated as makeup exams that there will be a penalty unless they can show proof whey they missed the first round of tests.
22. Faculty can run statistics on the system showing who has registered for exam and who has not.
23. Faculty can run statistics that show available seats per test session.
24. Faculty can override reservations either deleting a reservation or making a reservation for a student taking one of their classes BUT not other courses.
25. In order to allow someone to register for a test session that is full the faculty in charge of that class must increase the available number of seats for that session.
26. Personnel at the Testing Center or SDRC can view students in ALL classes and print a roster capable of being used for sign-in identified by the course, tests and alphabetized by students last name and first name.
27. Personnel at the Testing Center or SDRC may view reports on the availability of seats during any particular time.

**IV. Non-functional Requirements**

1. TRS is displayed in English.
2. Data is accurate and obtained from University Center sources when possible.
3. Test times correspond to the standard class time meetings set by the University.
4. Tests can be reserved not only for the University Testing Center but the Student
5. Disability Resource Center and other Distance Learning locations.
6. A Faculty member may not request or have access to tests, courses and sections, and students for which they are not assigned.
7. Students may not access courses and tests for which they are not enrolled.
8. Once a test has been given and the time passed, changes may not be made to the schedule.
9. A new test cannot be scheduled unless approved by the Testing Center.

**V. System Architecture**

This section presents a high-level overview of the anticipated system architecture using a class diagram. It shows the fundamental objects/classes that must be modeled with the system to satisfy its requirements. Each class on the diagram must include the attributes related to the class. All the relationships between classes and their multiplicity must be shown on the class diagram. The classes specified in this document only are those directly derived from the application domain. The class diagram must be developed using the Jude software.

**VI. System Model**

This section presents the use case diagram for the system under development. The use case diagram should be a complete version containing all the use cases needed to describe the functionality to be developed.

**VII. Appendices**

1. **Data Dictionary**
2. **Actor Descriptions**
3. **Use Case Descriptions**
4. **Class Descriptions**
5. **Attribute Descriptions**
6. **Raw Use Case Point Analysis**
   1. **Actor Summary Table**
   2. **Use Case Summary Table**
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   4. **Other Appendices**