TECHNICAL DESIGN SPECIFICATION

Registration Application

Created By: Bac Bui, Erik Bollinger, Jennifer Burmester

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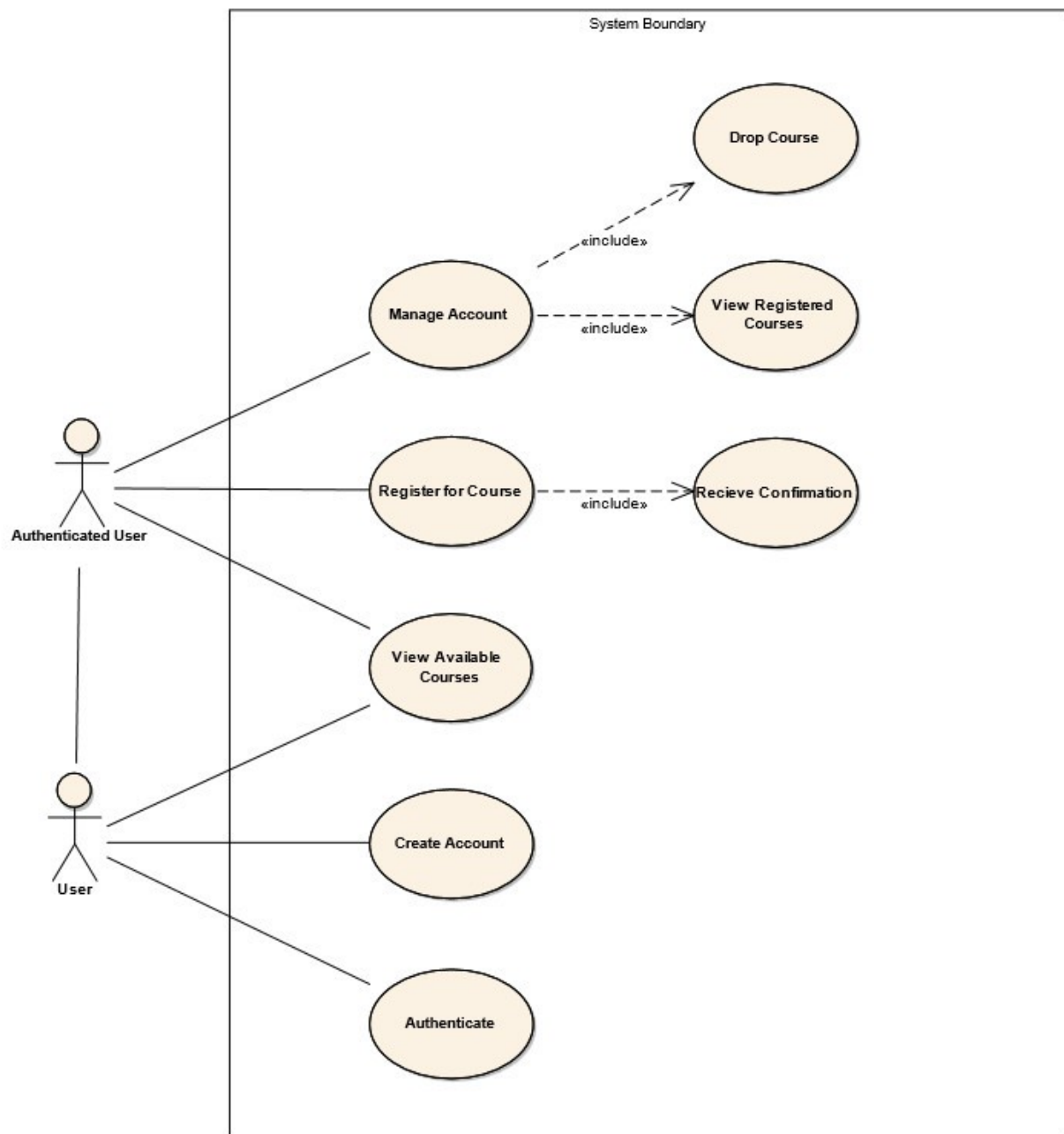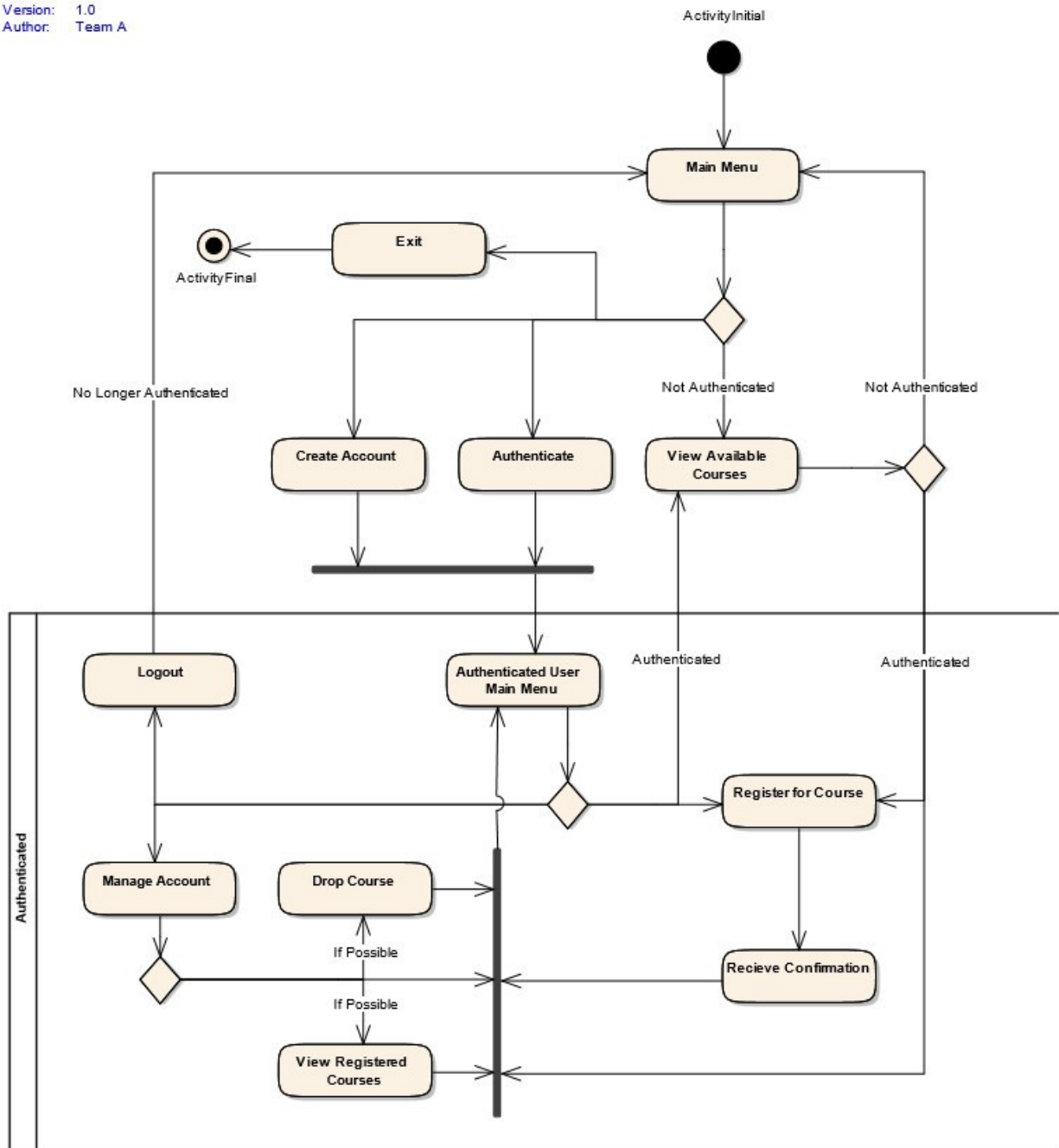
1. **Application Overview**

The Registration Application is an application tool that allows students to Add a Class, Drop a class, View available courses, in addition to course capacity, and View Registered Courses. A student will not be allowed to join a course that is already full. This application also provides security for users by allowing new users to create a new account, and an authenticated user to provide a username to login. A confirmation message will be displayed once a student Adds or Drops a class. This application data will be stored in a text file format and will be build using JAVA.

2. System Processes

3. System Flow

ActivityInitial

Main Menu

Exit

ActivityFinal

No Longer Authenticated

Not Authenticated

Not Authenticated

Create Account

Authenticate

View Available Courses

Logout

Authenticated User Main Menu

Authenticated

Authenticated

Register for Course

Authenticated

Manage Account

Drop Course

If Possible

Recieve Confirmation

If Possible

View Registered Courses

4. Object Model
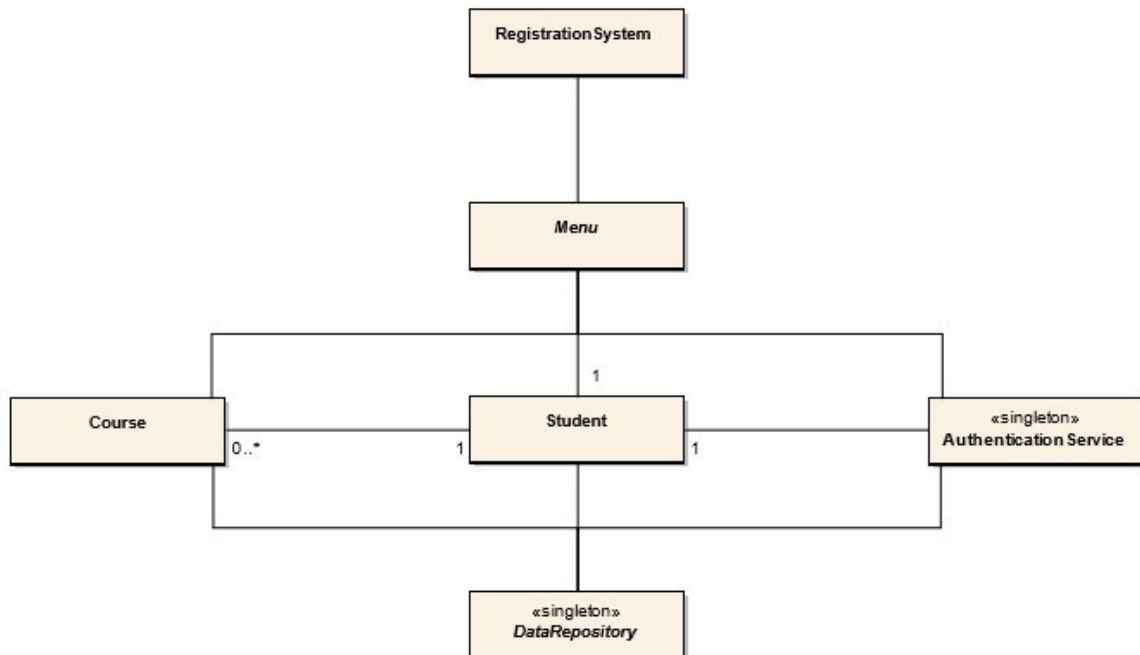
5. User Interface

5.1 Guest User

Application launches with guest access. The options below will be provided:

```
C = Create Account
L = Login
V = View Available Courses
X = Exit
Enter option - Press Enter_____
```

5.1.1 Create Account/Login

User enters username then presses Enter to create new account/login, then menu of step 5.2 will be rendered. If user enters nothing to any question and presses Enter, transaction will be canceled, and the menu of step 5.1 will be rendered.

```
User Name: _____
Enter all question then press Enter to create account
Enter nothing to cancel and go to the previous menu
```

5.1.2 View Available Courses

A list of all available courses that are not full will be displayed, and then menu of step 5.1 will be rendered.

5.1.3 Exit

Application will be terminated.

5.2 Authenticated User

If user is an Authenticated user then the below options will be displayed:

```
A = Add Class
B = Drop Class
R = View Registered Courses
```

```
V = View Available Courses
L = Log out
Enter option - Press Enter _____
```

5.2.1 Add Class

Add class option will be canceled if user enters nothing then presses enter.

Once user enters class identification number and presses Enter.

Application will validate for class identification number, to validate if student already enroll for this class, and availability of class.

If class is allowed to add, then confirmation message will be displayed, Menu of step 5.2 will be displayed.

Otherwise error message will be displayed. This menu will be re-displayed.

```
Please enter class identification number:   _____
Enter nothing - press Enter to Cancel
```

5.2.2 Drop Class

Drop class will be canceled if user enters nothing. Menu of step 5.2 will be displayed.

Once user enters class identification number and press Enter, then application will validate if student already enroll for this class. If student did not enroll for this class an error message will be displayed, and menu of this step will be re-displayed.

If class is allowed to drop then confirmation message will be displayed. Menu of step 5.2 will be displayed.

```
Please enter class identification number:   _____
Enter nothing - press Enter to return to Main Menu
```

5.2.3 View Registered Courses

A list of user's registered courses that are not full will be displayed. User may choose to return to menu 5.2. User may also enter a CourseID to drop a class.

5.2.4 View Available Courses

A list of all available courses will be displayed. User may choose to return to menu 5.2. User may also enter a CourseID to add a class.

5.2.5 Logout

System will revert to guest mode and step 5.1 will be rendered.

6. Data Structure

6.1 Course

CourseID	String(5)
CourseName	String(30)
CourseDescription	String(300)
Instructor	String(50)
AvailableSeats	Integer
MaximumSeats	Integer
CourseDates	String(50)

6.2 Student

Username	String(5 to 10)
CourseID	List<String>

7. Test Cases

7.1 Authenticate to Register

Users who are not authenticated can not register for courses.

7.2 Confirmation

Users who register for a course will receive confirmation.

7.3 Privacy

Users can not view other user's data.

7.4 Full Courses

Users can not register for a class that is at capacity.

7.5 Registered to Drop

Users must be registered for a course to drop the course.

7.5 Course Capacity

When users add and drop courses the course capacity must reflect the change.