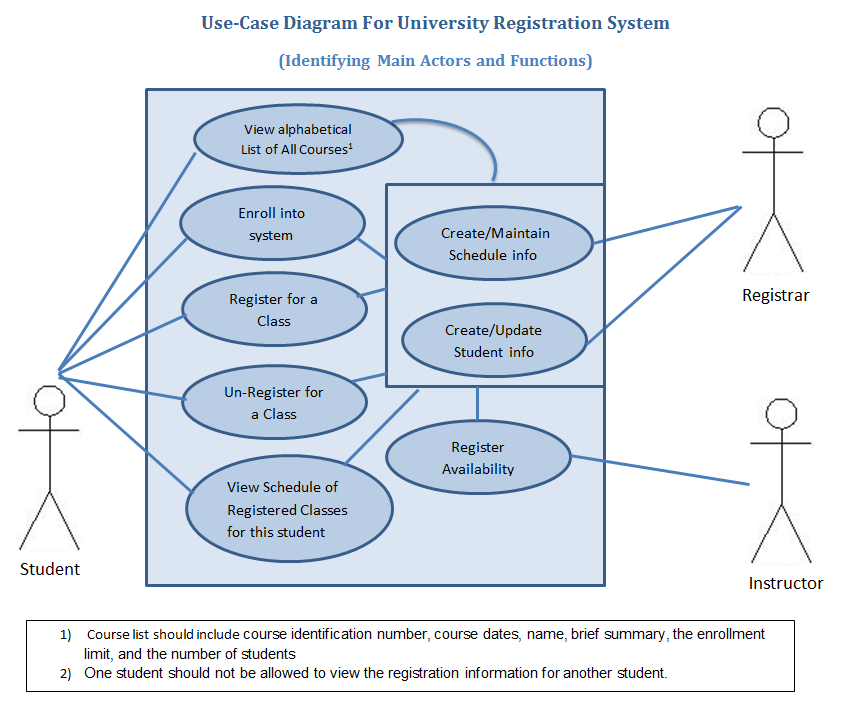
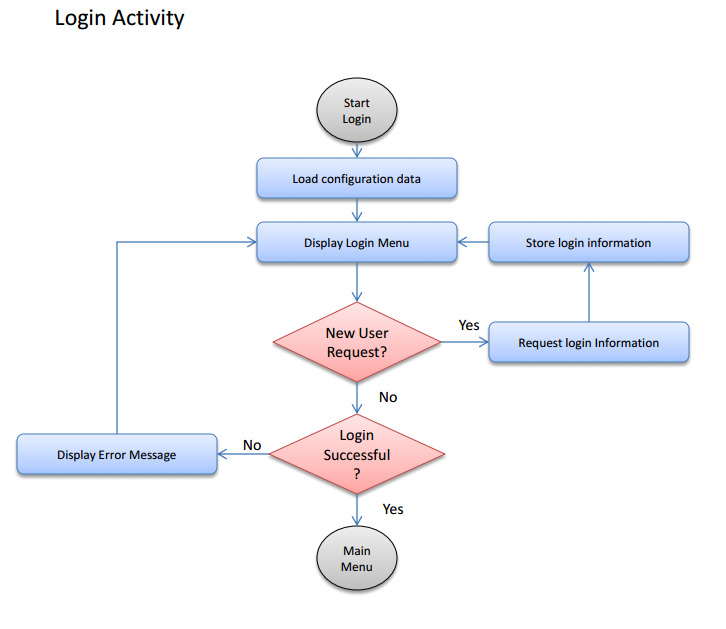
**Technical Design**

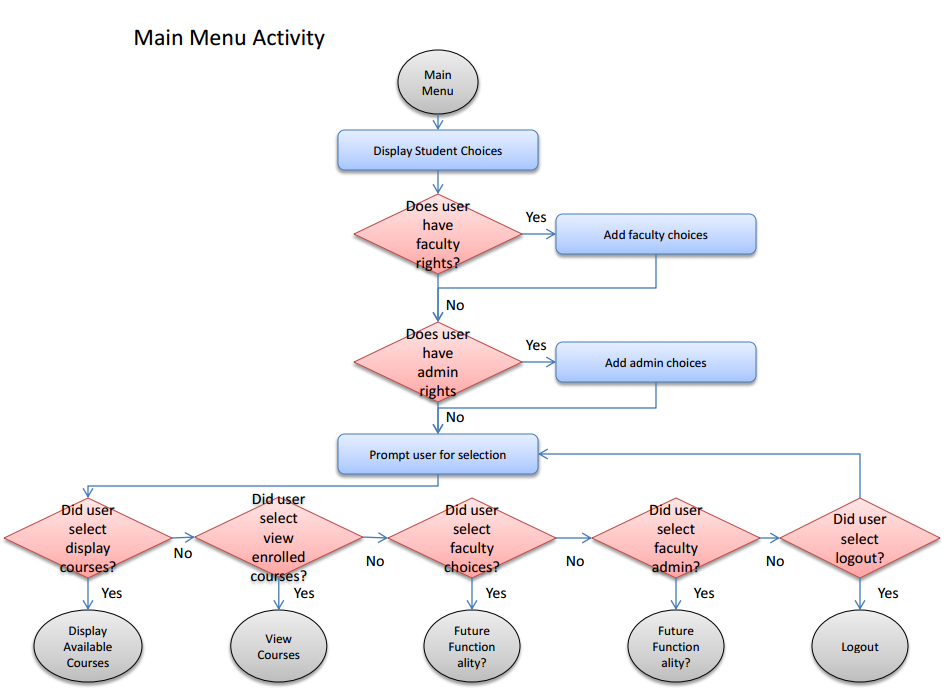
**1. Application Overview**

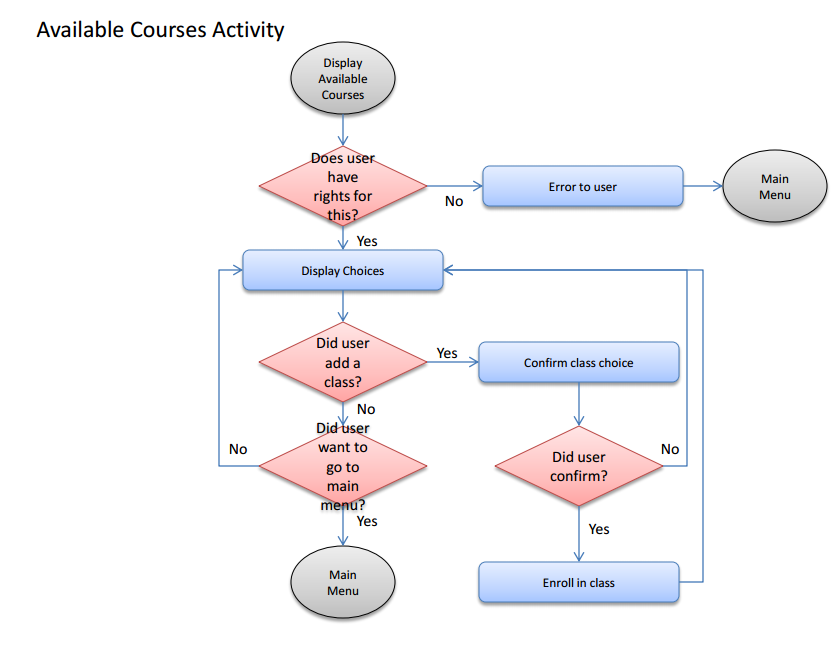
**2. System Process**

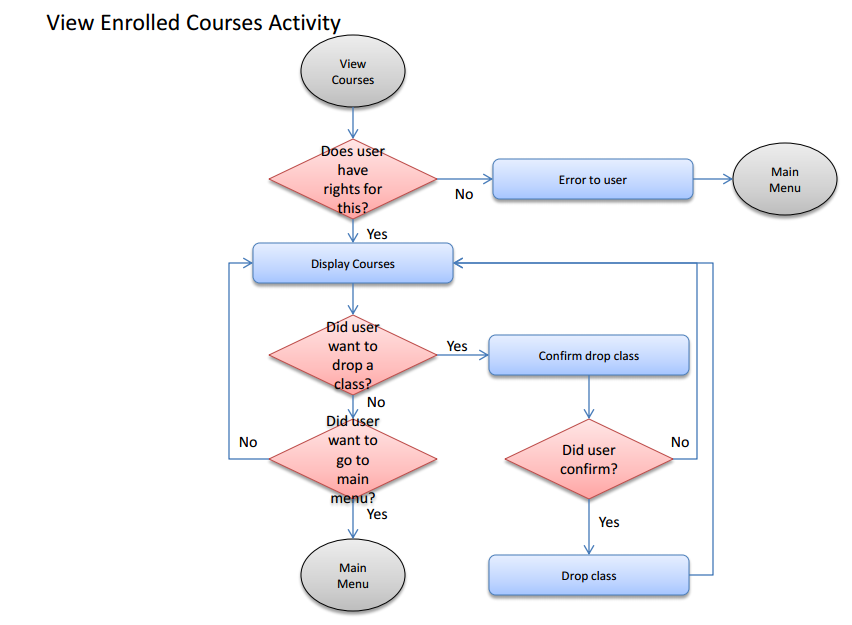


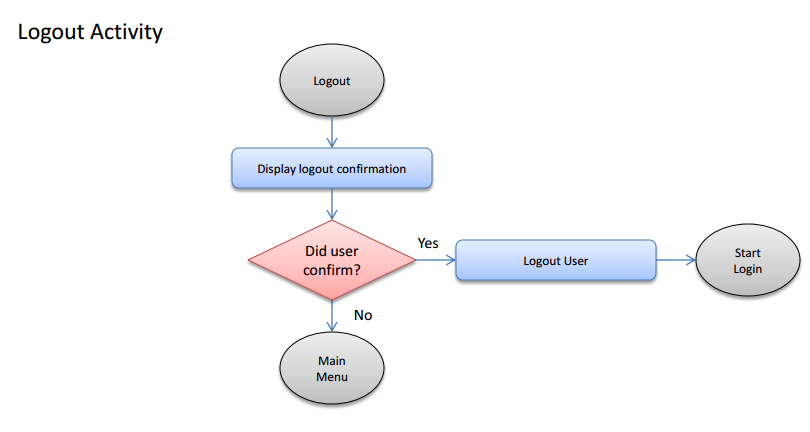
**3. System Flow**











**4. Object Model**

**4.1 Main Function**

**4.2 Course Class**

|  |
| --- |
|  |
| Variables  Identification Number : String  Start Date : Date  End Date : Date  Name : String  Summary : String  Enrollment Limit : Integer  Number of students Enrolled : Integer |
| Constructors  Course(String identificationNumber, Date startDate, Date endDate, String name, String summary, int enrollmentLimit, int studentsEnrolled) |
| Methods  String getIdentificationNumber() : Returns the course identification number  Date getStartDate() : Returns the course start date  Date getEndDate() : Returns the course end date  String getName() : Returns the course name  String getSummary() : Returns the course brief summary  Int getEnrollmentLimit() : Returns the course enrollment limit  Int getStudentsEnrolled() : Returns the current number of students enrolled in the course  void setIdentificationNumber(String identificationNumber) : sets the course identification  number  void setStartDate(Date startDate) : sets the course start date  void setEndDate(Date endDate) : sets the course end date  void setName(String name) : sets the course name  void setSummary(String summary) : sets the course summary  void setEnrollmentLimit(int enrollmentLimit) : sets the course enrollment limit  void setStudentsEnrolled(int studentsEnrolled) : sets the current number of students enrolled in  the course  void printCourse() : prints course information  void addStudent() : increments the current number of students enrolled by one  void removeStudent() : decrements the current number of student enrolled by one |

**4.3 Student Class**

**4.4 File I/O Utility Class**

|  |
| --- |
|  |
| Constants  Directory Path : String  Courses File : String  Students File : String |
| Constructors |
| Methods  Static ArrayList<Course> readCourseData() : Reads course data from the courses file and returns  the information in an array list of course objects  Static ArrayList<Student> readStudentData() : Reads student data from the students file and  returns the information in an array list of student objects  Static void saveCourseData(ArrayList<Course> courses) : Saves course information contained in  the courses ArrayList to a file  Static void saveStudentData(ArrayList<Student> students) : Saves course information contained  In the students ArrayList to a file |

**4.5 Login Utility Class**

|  |
| --- |
|  |
| Variables |
| Constructors |
| Methods  Static Student loginStudent(ArrayList<Student> studentList) : Prompts the user for a name and  password. Returns the student associated with the information. Returns null if login is  unsuccessful. |

**5. User interface mockups (menus),**

**6. Data structure**

**6.1 Course file data structure**

The course data file structure will be an ascii comma separated list of fields in which one courses data is captured on each line. The data structure of each row will be:

identificationNumber, startDate, endDate, name, summary, enrollmentLimit, studentsEnrolled

**6.2 Student file data structure**

**7. Test Cases**