

Software Design and Analysis – Fall 2020

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Section B

Case Study

Task 2 - List of use cases:

1. Successful Login
2. Courses assigned to teachers
3. Course catalog is maintained
4. Course catalog can be printed
5. Select recommended courses
6. Select courses for improvement
7. Information sent to billing system
8. Students can add courses
9. Students can drop courses
10. Students can only view their marks
11. Professors can upload marks
12. Professors can edit marks
13. Feedback from students
14. Logout

Task 3 - Description of 3 use cases:

- **Information sent to billing system**

Goal: To send information to billing system

Preconditions: Successful registration of students

Successful end condition: Fee challan generated

Failed end condition: Fee challan not generated

Primary actors: Students

Secondary Actors: Finance/Accounts managers

Trigger: Students' successful registration

Main Flow: 1. student selects a course to register

2. strength of course between 20 and 100

3. course registered successfully

4. information sent to billing system

5. fee challan generated

Alternative Flow: 1. student selects a course to registered

2. strength of students checked – greater than 100

3. course not registered

4. no information sent to billing system

5. no fee challan generated

- **Students can add courses**

Goal: Registration of students

Preconditions: Passed pre-requisite of selected course

Successful end condition: Courses registered

Failed end condition: Courses not registered

Primary actors: Students

Secondary Actors: System

Trigger: Successful login

Main Flow: 1. successful login

2. course selected

3. pre-requisite is passed

4. strength of students between 20 and 100

5. course added to courses list

Alternative Flow: 1. successful login

2. pre-requisite not passed

3. strength of students greater than 100

4. course not added to courses list

- **Professors can edit marks**

Goal: Edit marks of students

Preconditions: Marks of students uploaded

Successful end condition: Students' marks updated

Failed end condition: Student's marks not updated

Primary actors: Professor

Secondary Actors: Student/System

Trigger: Successful Login

Main Flow: 1. successful login

2. marks uploaded

3. marks updated

Alternative Flow: 1. unsuccessful login

Task 4 - Choice of UML tool: Online Visual Paradigm

Reason: Because its GUI is user-friendly and it's available online for free. You don't have to pay or download it to use.

Task 5 - UML Diagram:

