Ferris DeHart
Seth Richard
Nicklaus Settoon
Professor Mukhopadhyay
3380-Object_Oriented_Design
due 2020-Nov-16th
Github_link: https://github.com/nicksettoon/3380-xCourse
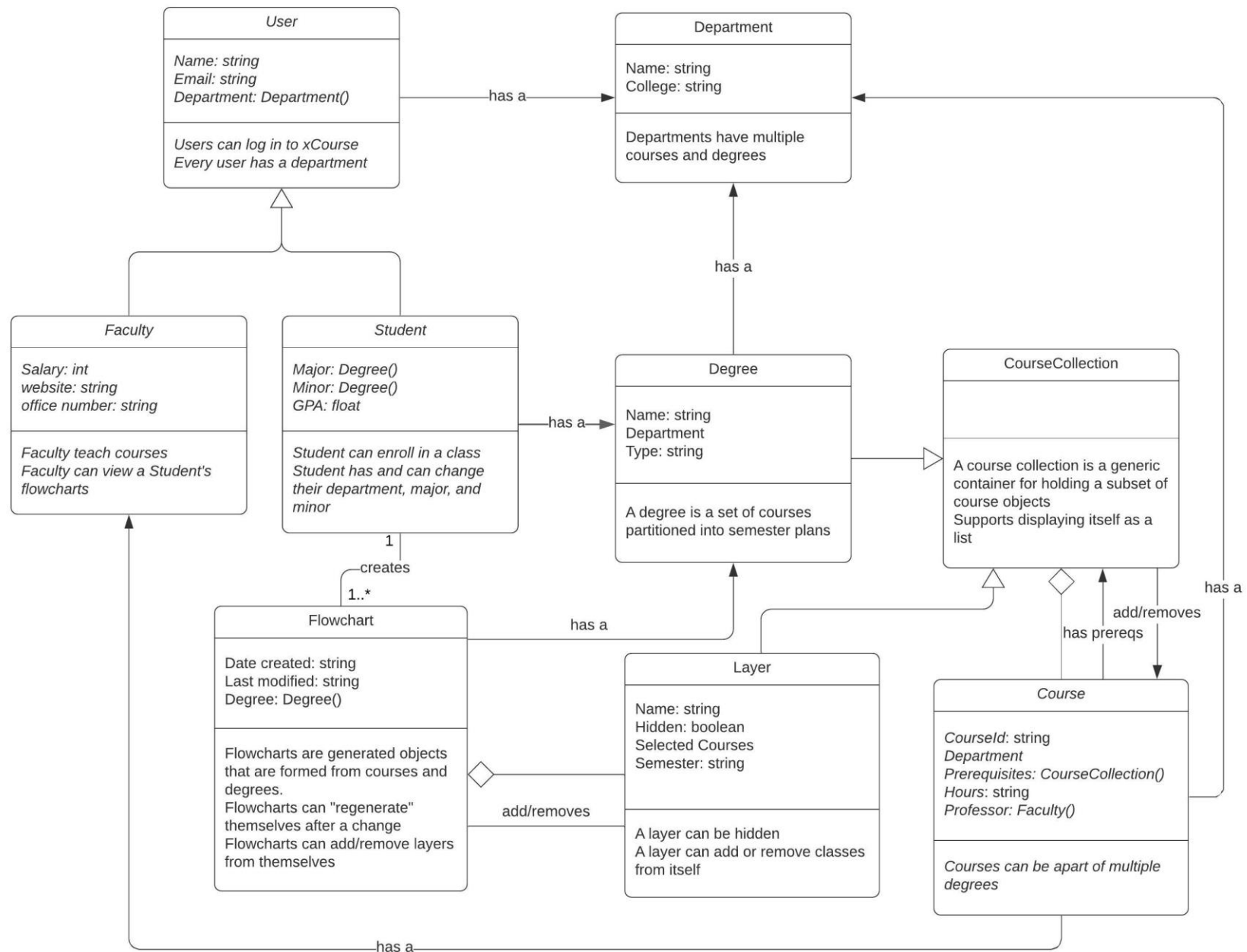
Analysis and Design Model Diagrams for xCourse

Class Diagram for xCourse

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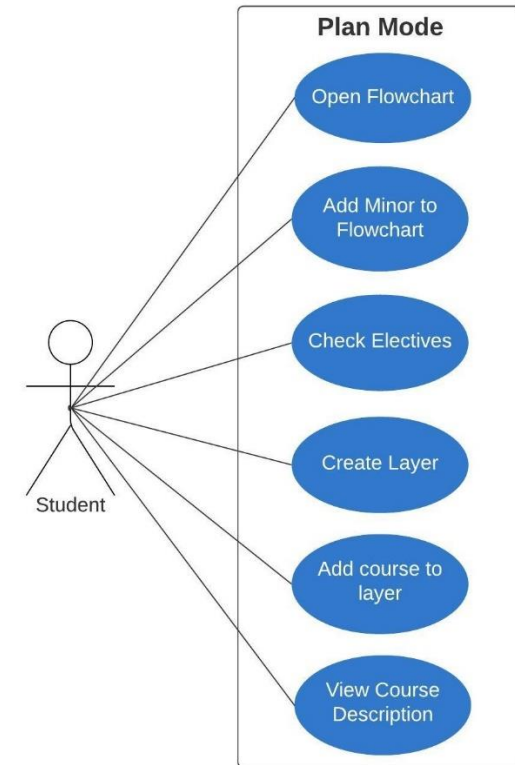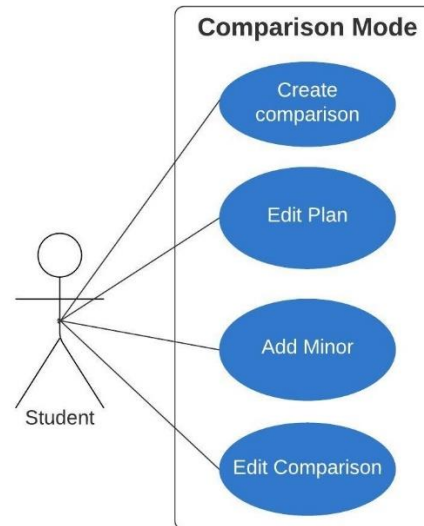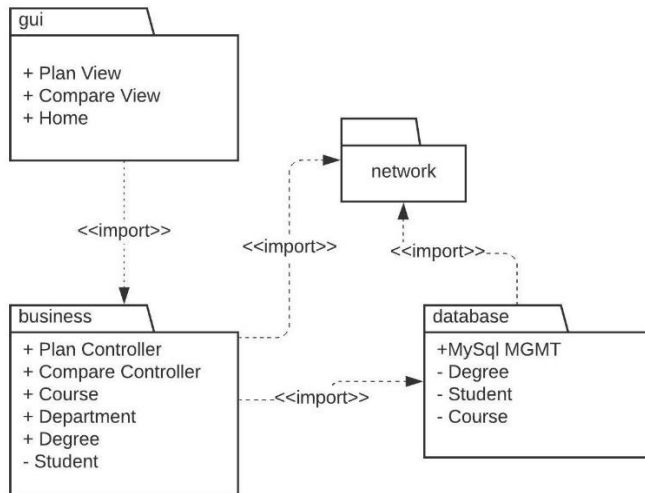## Use Case Diagram for xCourse

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Package Diagram for xCourse

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gui

+ Plan View
+ Compare View
+ Home

network

business

+ Plan Controller
+ Compare Controller
+ Course
+ Department
+ Degree
- Student

database

+MySql MGMT
- Degree
- Student
- Course

<<import>>
<<import>>
<<import>>
<<import>>

Comparison Mode

- Create comparison
- Edit Plan
- Add Minor
- Edit Comparison

Student

Plan Mode

- Open Flowchart
- Add Minor to Flowchart
- Check Electives
- Create Layer
- Add course to layer
- View Course Description
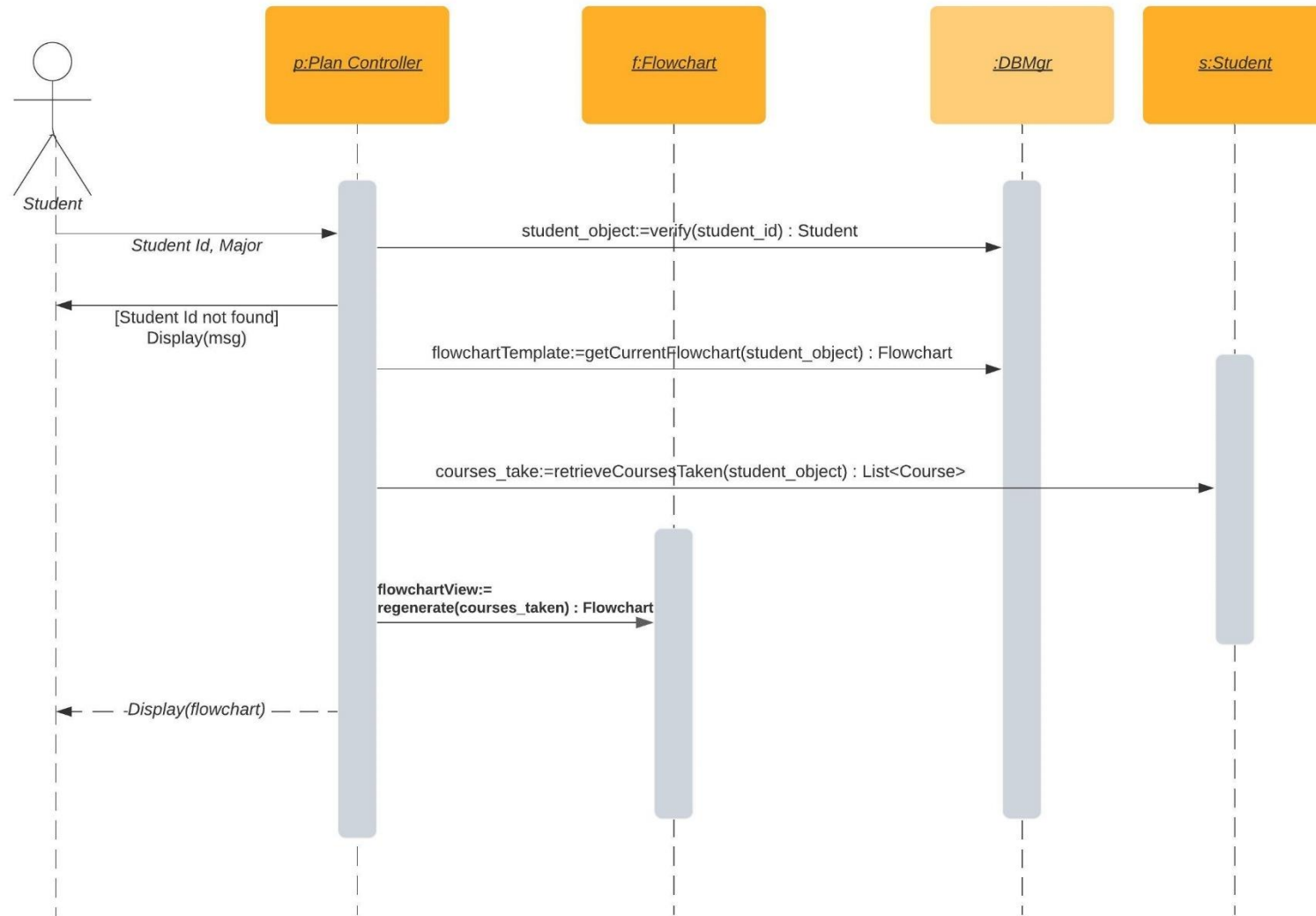
Student

Analysis Sequence Diagram for Viewing Flowchart

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Design Sequence Diagram for Viewing Flowchart
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Analysis Sequence Diagram for Comparing Flowcharts

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Compare View

Compare Controller

Database

Student

Student Id, Major

Get current degree plan,
get secondary degree plan

degree name, student id

[Student Id not found]
error message

[Student Id not in database]

Comparison View
with both flowcharts

Both degree objects,
student record object
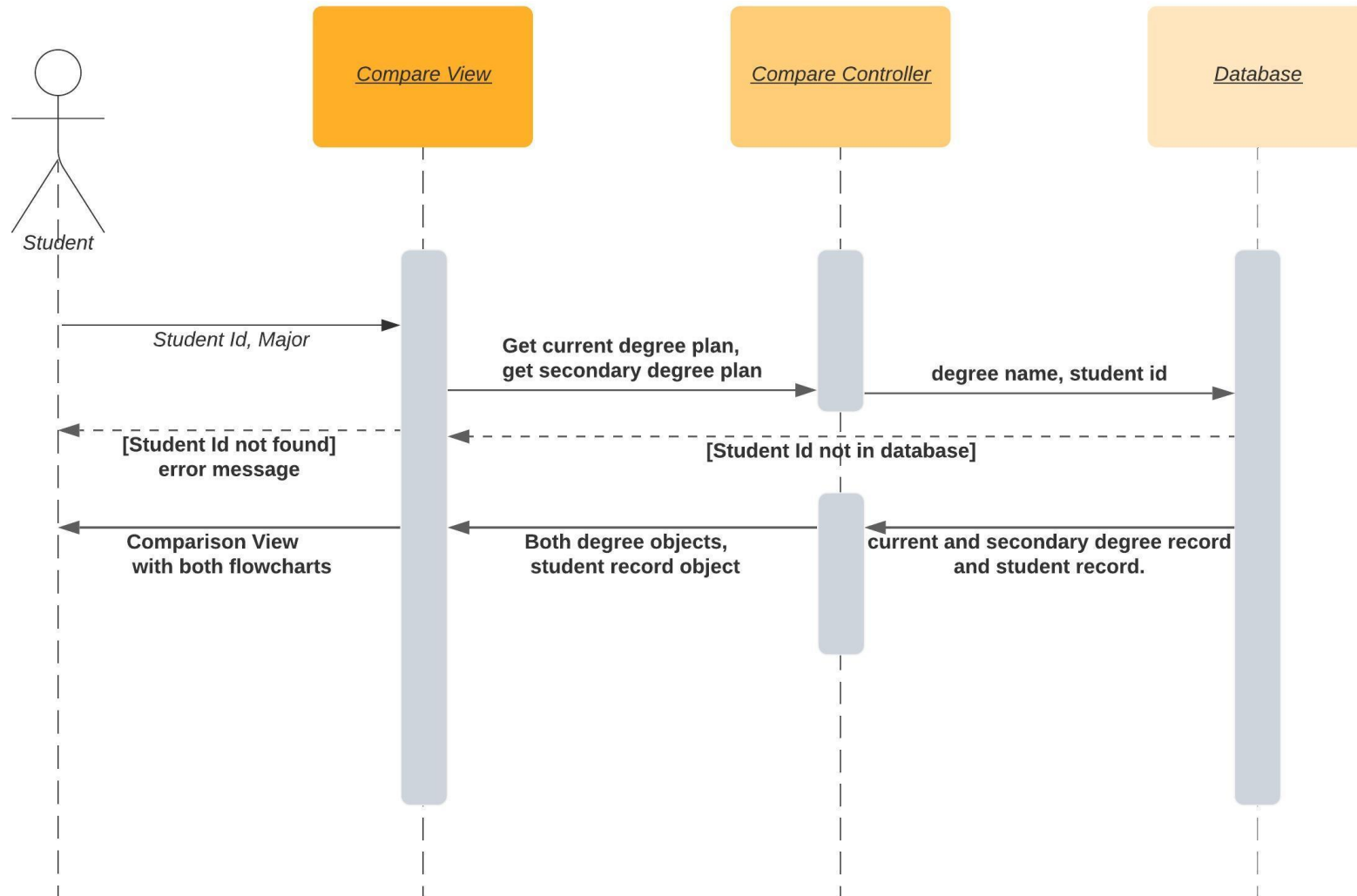
current and secondary degree record
and student record.

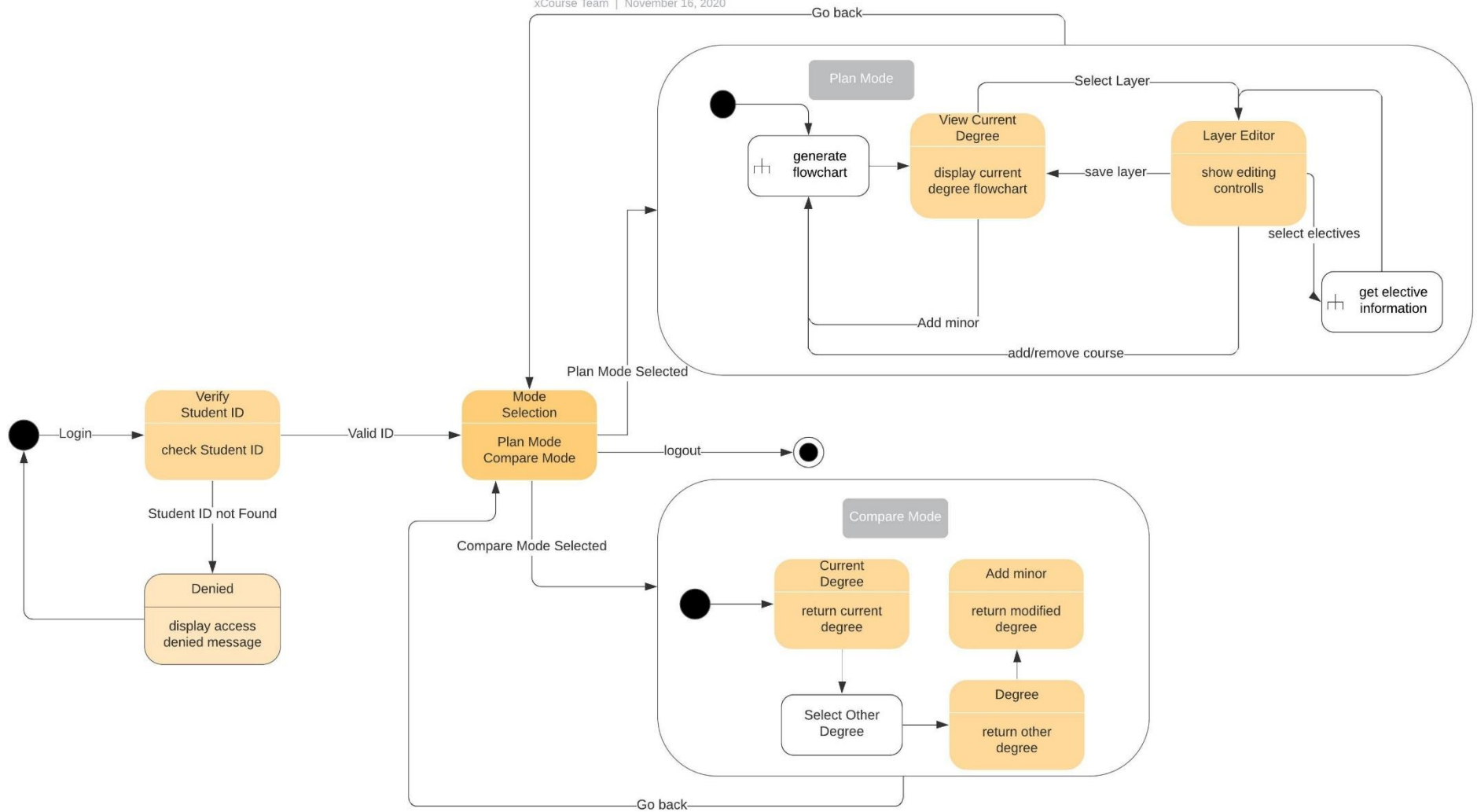**Design Sequence Diagram for Comparing Flowcharts**
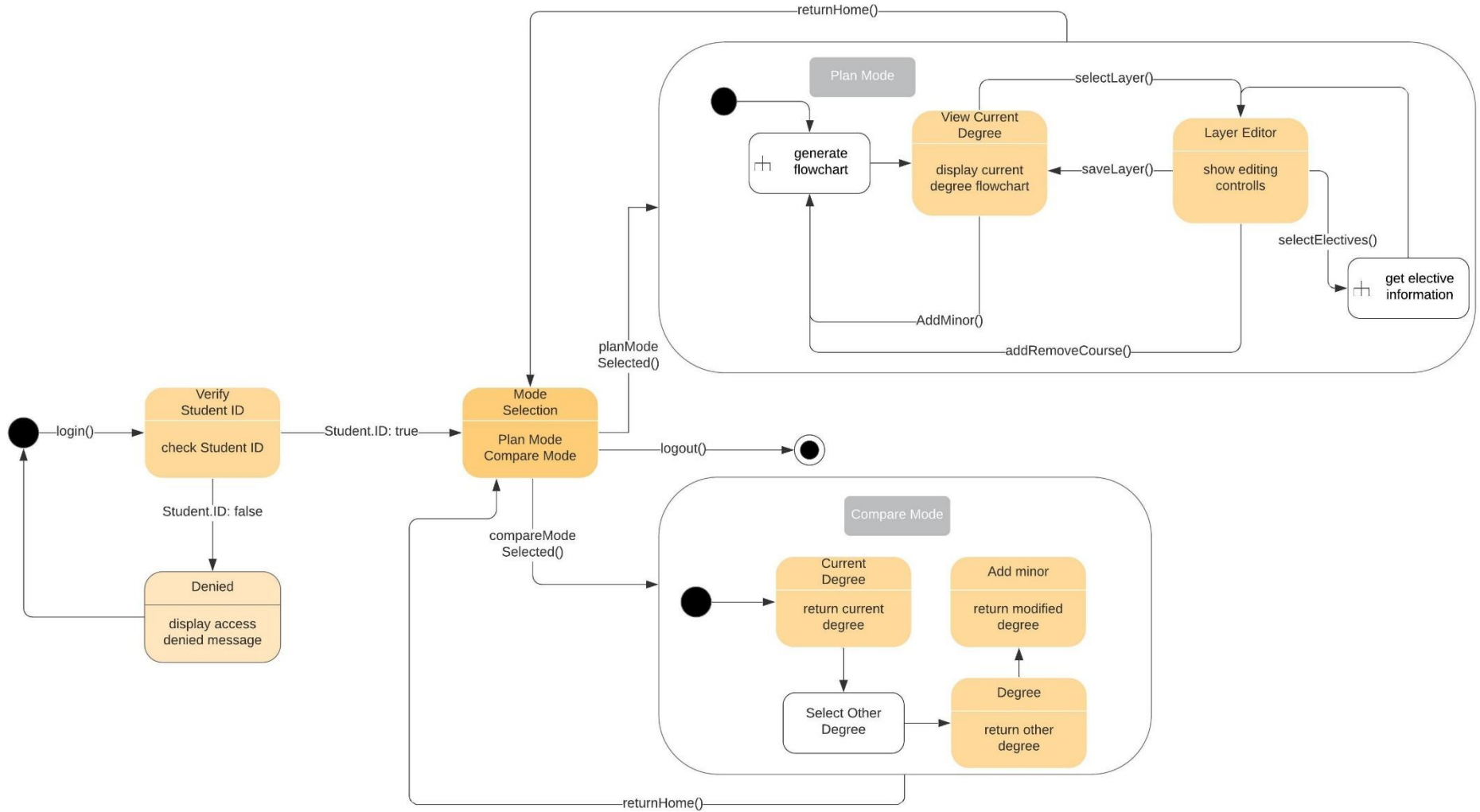xCourse Team | November 16, 2020

Analysis State Diagram for xCourse

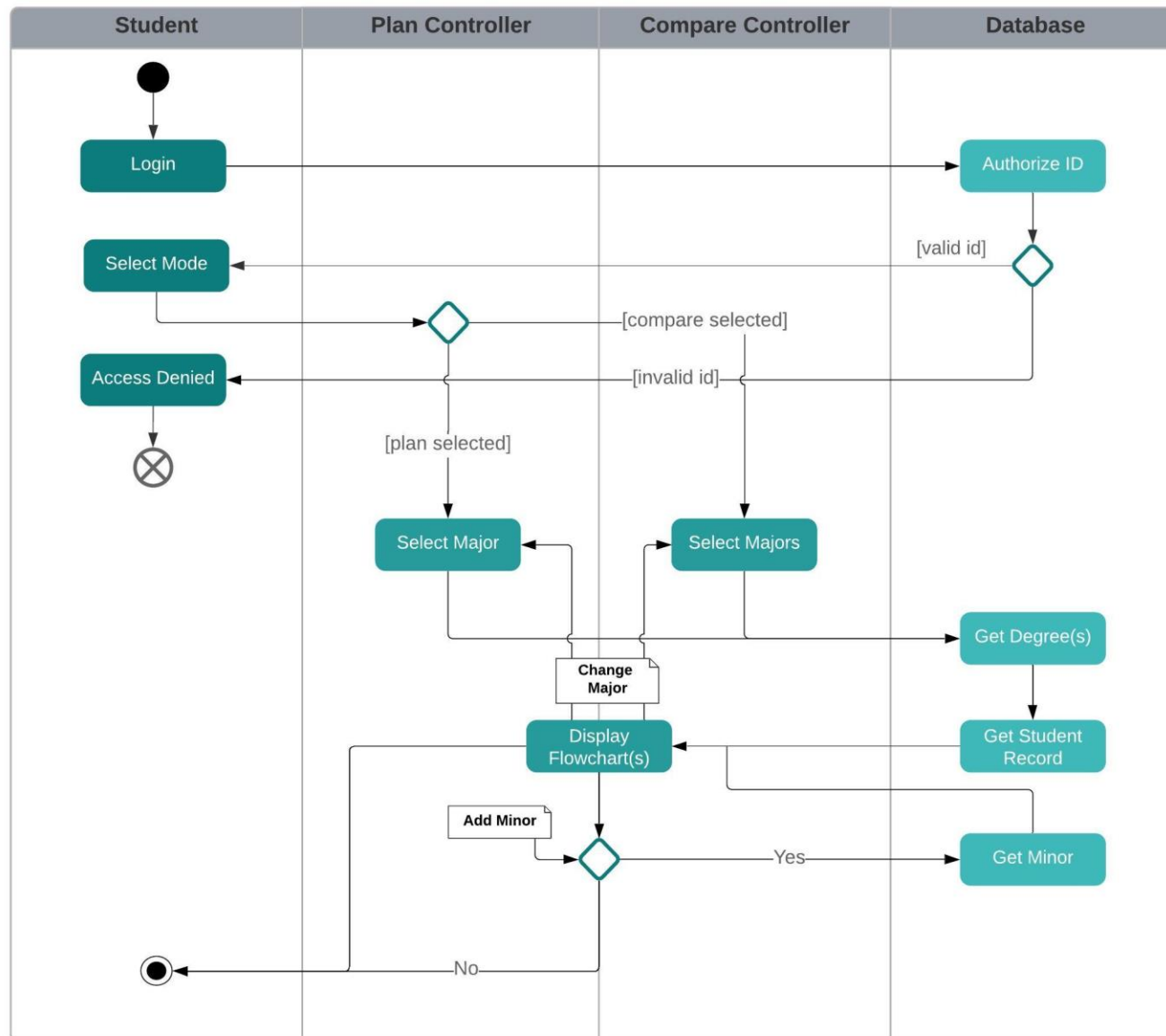xCourse Team | November 16, 2020

Design State Diagram for xCourse
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Activity Diagram for xCourse
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Object Diagram for xCourse

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d : Department

Name = "Computer Science"
College = "Engineering"

---

s : Student

Name: "Arthur Dent"
Email: "dent42@earth.com"
Department: d
Major: dsa
Minor: None
GPA: 2.9

-newChart()

---

main : Flowchart

Date created: "2020.11.16"
Last modified: "never"
Degree: dsa

+createFlowchart("main")

---

c2: Course

CourseId: string
Name: "Cryptocurrencies"
Department: d
Prerequisites: None
Hours: "1:30-2:30"
Professor: f

-init()

-addLayer("sp21-plan")

---

base : Layer

Name: "Data Science and
Analytics"
Hidden: False
collection: dsa
Semester: "None"

-setCollection(dsa)

---

sp21 : Layer

Name: "sp21-plan"
Hidden: False
collection: sp21Courses
Semester: "spring"

-setCollection(sp21Courses)

+viewFlowchart(main)

---

c1 : Course

CourseId: "42"
Name: "Cool Stuff"
Department: d
Prerequisites: None
Hours: "10:30-11:30"
Professor: f

---

f : Faculty

Name: "Supratik
Mukhopadhyay"
Email: "supratik@csc.lsu.edu"
Department: d
Salary: INT_MAX
website: "long complicated url"
office number: "225-578-1496"

createCourse(c1Params)
createCourse(c2Params)

+addCourse(c2)

---

dsa : Degree

Name: "Computer Science:
Data Science and Analytics"
Department: d
Type: "Major"

- add()

+rmCourse(c2)

+addCourse(c1)

---

sp21Courses: CourseCollection

- add(c1)
- del(c2)