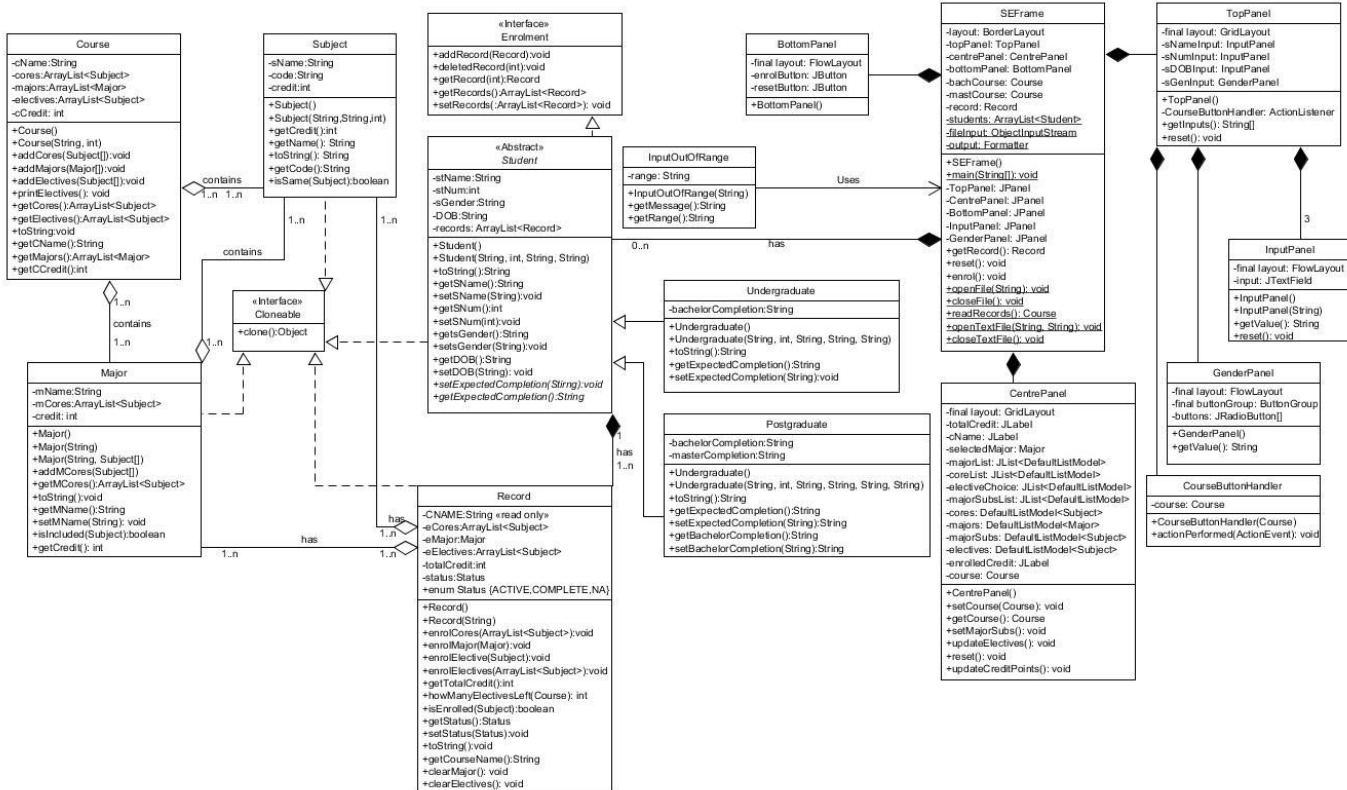


Assignment 3: CSCI121

Sean Overton

SN: 6421490

Task 1) UML Diagram



Task 2) GUI and explanations

The screenshot shows the Student Enrolment System GUI. It includes fields for Student Name, Student Number, Gender (radio buttons for male and female), and DOB. The main area displays the Bachelor of Computer Science Course Structure, showing the total credit (144), core subjects (CSCI111, CSCI113, CSCI114, CSCI115), major subjects (Big Data, Cyber Security, Digital System Security, Software Engineering), elective subjects (CSCI117, WFO411, CSCI116, ISIT112), and enrolled credit (96). Buttons for Enrol and Reset are at the bottom.

-Design uses a combination of JFrame, JPanel, JTextField, JLabel, JRadioButton, JList and JButton to create the above GUI layout.

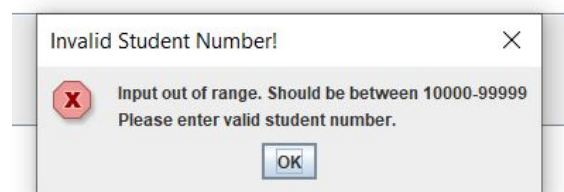
Task 3) Compilation and Testing

```
C:\Users\Sean\Documents\CSI121 OOP\ass3>javac SEFrame.java
```

```
C:\Users\Sean\Documents\CSI121 OOP\ass3>java SEFrame
```

Case 1: "Bob"

Demonstrates input validation when enrolment button pressed:



Major:

Big Data
Cyber Security
Digital System Security
Software Engineering

Major subjects:

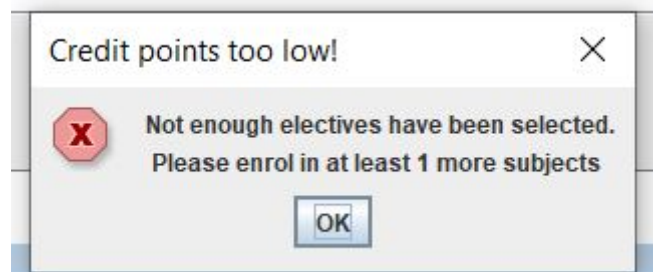
CSCI361 (Cryptography and Secure Applications, 6pt)
CSCI368 (Network Security, 6pt)
CSCI262 (System Security, 6pt)
CSCI376 (Multicore and GPU Programming, 6pt)

Elective subjects:

CSCI317 (Database Performance Tuning, 6pt)
INFO411 (Data Mining and Knowledge Discovery, 6pt)
CSCI316 (Big Data Mining Techniques and Implementation, 6pt)
ISIT312 (Big Data Management, 6pt)

Enrolled Credit: 138

Enrol Reset

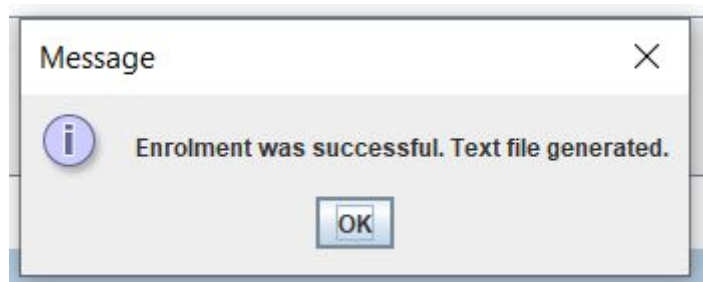


Student Enrolment System

Student Name: Student Number:

Gender: ☒ male ☐ female DOB:

Bachelor of Computer Science Course Structure	Master of Computer Science Course Structure
Course Name: Bachelor of Computer Science	
Total Credit: 144	
Core subjects:	
CSCI111 (Programming Fundamentals, 6pt) CSCI113 (Problem solving, 6pt) CSCI114 (System Analysis, 6pt) CSCI115 (Data Management and Security, 6pt)	
Major:	
Big Data Cyber Security Digital System Security Software Engineering	
Major subjects:	
CSCI301 (Cryptography and Secure Applications, 6pt) CSCI308 (Network Security, 6pt) CSCI302 (System Security, 6pt) CSCI316 (Multicore and GPU Programming, 6pt)	
Elective subjects:	
CSCI317 (Database Performance Tuning, 6pt) INFO411 (Data Mining and Knowledge Discovery, 6pt) CSCI316 (Big Data Mining Techniques and Implementation, 6pt) INFO312 (Big Data Management, 6pt)	
Enrolled Credit: 144	

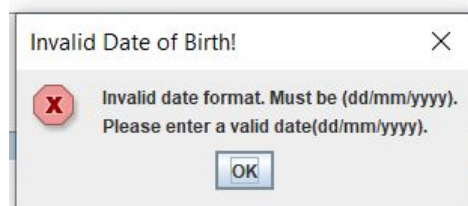


-successful enrolment for Bob

Case 2: "Amy"

DOB:

	Master of Computer Science Course Structure



-demonstrates different error thrown for different date input errors

Student Enrolment System

Student Name: Amy Student Number: 55555

Gender: ☐ male ☒ female DOB: 23/05/1990

Bachelor of Computer Science Course Structure Master of Computer Science Course Structure

Course Name: Master of Computer Science

Total Credit: 96

Core subjects:

CSCI814 (IT Project Management, 6pt)
CSCI851 (Advanced Programming, 6pt)
CSCI803 (Algorithms and Data structures, 6pt)
CSCI835 (Database Systems, 6pt)

Major:

Software Engineering
Intelligent Systems
Network and Information Security
Machine Learning and Big Data

Major subjects:

CSCI864 (Computational Intelligence, 6pt)
CSCI924 (Reasoning and Learning, 6pt)
CSCI844 (Perception and Planning, 6pt)

Elective subjects:

CSCI862 (System Security, 6pt)
CSCI826 (Human Computer Interaction, 6pt)
SIT925 (Strategic Network Design, 6pt)
CSCI933 (Machine Learning Algorithms and Applications, 6pt)

Enrolled Credit: 96

Enrol Reset

Message

Enrolment was successful. Text file generated.

OK

-successful enrolment for Amy

Testing reset:

Student Enrolment System

Student Name: John Student Number: 23534

Gender: ☒ male ☐ female DOB: 12/12/2000

Bachelor of Computer Science Course Structure Master of Computer Science Course Structure

Course Name: Bachelor of Computer Science

Total Credit: 144

Core subjects:

SIT111 (Programming Fundamentals, 6pt)
SIT113 (Problem solving, 6pt)
SIT114 (System Analysis, 6pt)
SIT115 (Data Management and Security, 6pt)

Major:

Big Data
Cyber Security
Digital System Security
Software Engineering

Major subjects:

SCI317 (Database Performance Tuning, 6pt)
WFO411 (Data Mining and Knowledge Discovery, 6pt)
SCI316 (Big Data Mining Techniques and Implementation, 6pt)
SIT312 (Big Data Management, 6pt)

Elective subjects:

SCI301 (Contemporary Topics in Security, 6pt)
SCI262 (System Security, 6pt)
SCI369 (Ethical Hacking, 6pt)
SIT302 (Cybersecurity, 6pt)

Enrolled Credit: 132

Enrol Reset

-all inputs and selections cleared and pop up notifies of success (below)

student enrolment system

Student Name: Student Number:

Gender: ☒ male ☐ female DOB:

Bachelor of Computer Science Course Structure Master of Computer Science Course Structure

Course Name:

Total Credit:

Core subjects:

Major:

Major subjects:

Elective subjects:

Enrolled Credit:

Enrol Reset

Message

Reset was successful!

OK

Task 4) The corresponding text files produced:

Bob's:

View

Cut Copy path Paste shortcut Move to Copy to Delete Rename Organize

is PC > Documents > CSI121 OOP > ass3

Name

- A3_class_diagram_CSIT121
- A3_class_diagram_CSIT121
- A3_class_diagram_CSIT121
- A3_class_diagram_CSIT121_S20
- Assignment 3 CSIT121 - S20
- bcs.ser
- Bob_Bachelor of Computer Science
- BottomPanel.class
- CentrePanel.class
- Course.class
- Enrolment.class
- InputOutOfRange.class
- InputPanel.class
- Major.class
- mcs.ser
- Postgraduate.class
- Record\$Status.class
- Record.class
- SEFrame\$1.class
- SEFrame\$BottomPanel\$1.class

Bob_Bachelor of Computer Science - Notepad

File Edit Format View Help

Student: Bob (24134, male, 12/03/2000)

Course Name: Bachelor of Computer Science, (ACTIVE)

Cores:

- CSIT111 (Programming Fundamentals, 6pt)
- CSIT113 (Problem solving, 6pt)
- CSIT114 (System Analysis, 6pt)
- CSIT115 (Data Management and Security, 6pt)
- CSIT121 (Object Oriented Design and Programming, 6pt)
- CSIT127 (Networks and Communications, 6pt)
- CSIT128 (Introduction to Web Technology, 6pt)
- CSCI235 (Database Systems, 6pt)
- CSCI251 (Advanced Programming, 6pt)
- CSIT214 (IT Project Management, 6pt)
- MATH221 (Mathematics for Computer Science, 6pt)
- CSCI203 (Data Structures and Algorithms, 6pt)
- CSIT226 (Human Computer Interaction, 6pt)
- CSIT314 (Software Development Methodologies, 6pt)
- CSIT321 (Project, 12pt)

Major: Digital System Security

Electives:

- CSCI317 (Database Performance Tuning, 6pt)
- INFO411 (Data Mining and Knowledge Discovery, 6pt)
- CSCI316 (Big Data Mining Techniques and Implementation, 6pt)
- ISIT312 (Big Data Management, 6pt)

Total Enrolled Credit: 144pt

Amy's:

View

Cut

Copy path

Paste shortcut

Move to

Copy to

Delete

Rename

Organize

is PC > Documents > CS1121 OOP > ass3

Name

A3_class_diagram_CSIT121

A3_class_diagram_CSIT121

A3_class_diagram_CSIT121

A3_class_diagram_CSIT121_S20

Amy_Master of Computer Science

Assignment 3 CSIT121 - S20

bcs.ser

Bob_Bachelor of Computer Science

BottomPanel.class

CentrePanel.class

Course.class

Enrolment.class

InoutOutOfRange.class

Amy_Master of Computer Science - Notepad

File Edit Format View Help

Student: Amy (56565, female, 23/06/1990)

Course Name: Master of Computer Science, (ACTIVE)

Cores:

CSCI814 (IT Porject Management, 6pt)

CSCI851 (Advanced Programming, 6pt)

CSCI803 (Algorithms and Data structures, 6pt)

CSCI835 (Database Systems, 6pt)

MTS9302 (Corporate Network Management, 6pt)

CSIT940 (Research Methodology, 6pt)

CSCI920 (Contemporary Topics in Computer Science, 6pt)

CSCI992 (Professional Project, 12pt)

Major: Software Engineering

Electives:

CSCI862 (System Security, 6pt)

CSIT826 (Human Computer Interaction, 6pt)

ISIT925 (Strategic Network Design, 6pt)

CSCI935 (Computer Vision Algorithms and Systems, 6pt)

Total Enrolled Credit: 96pt