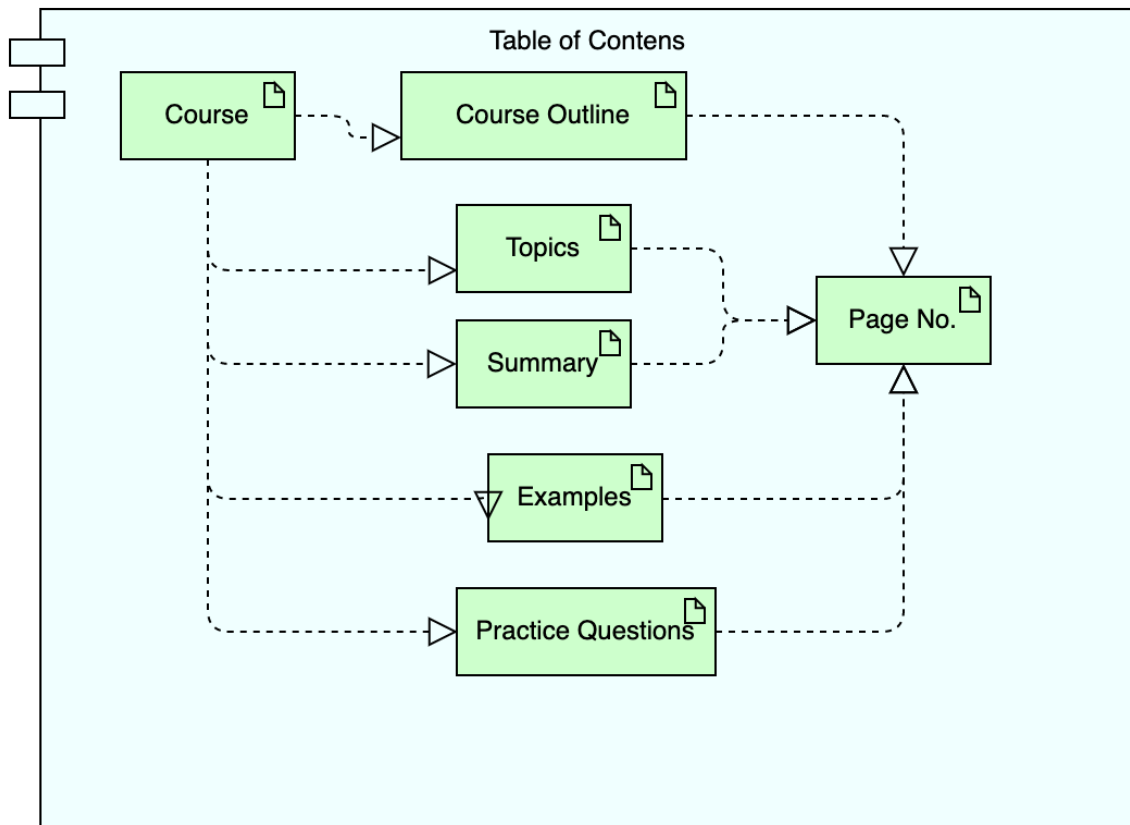# COMP3004
Object-Oriented Software Engineering

Assignment 1: Modeling a platform that enables you to create your own textbook for learning system programming in C
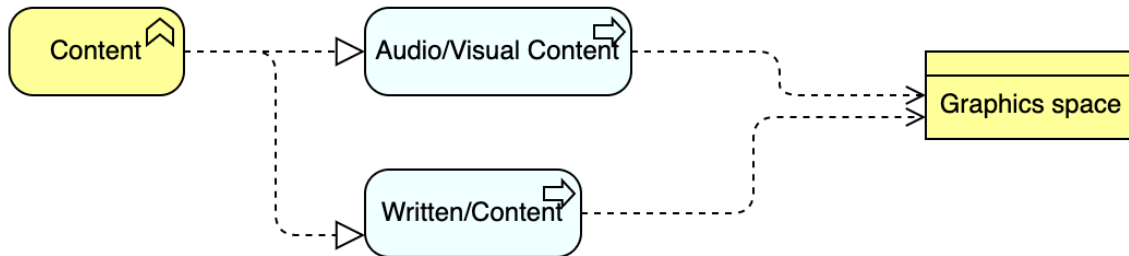
Prepared for: -
Vojislav D Radonjic
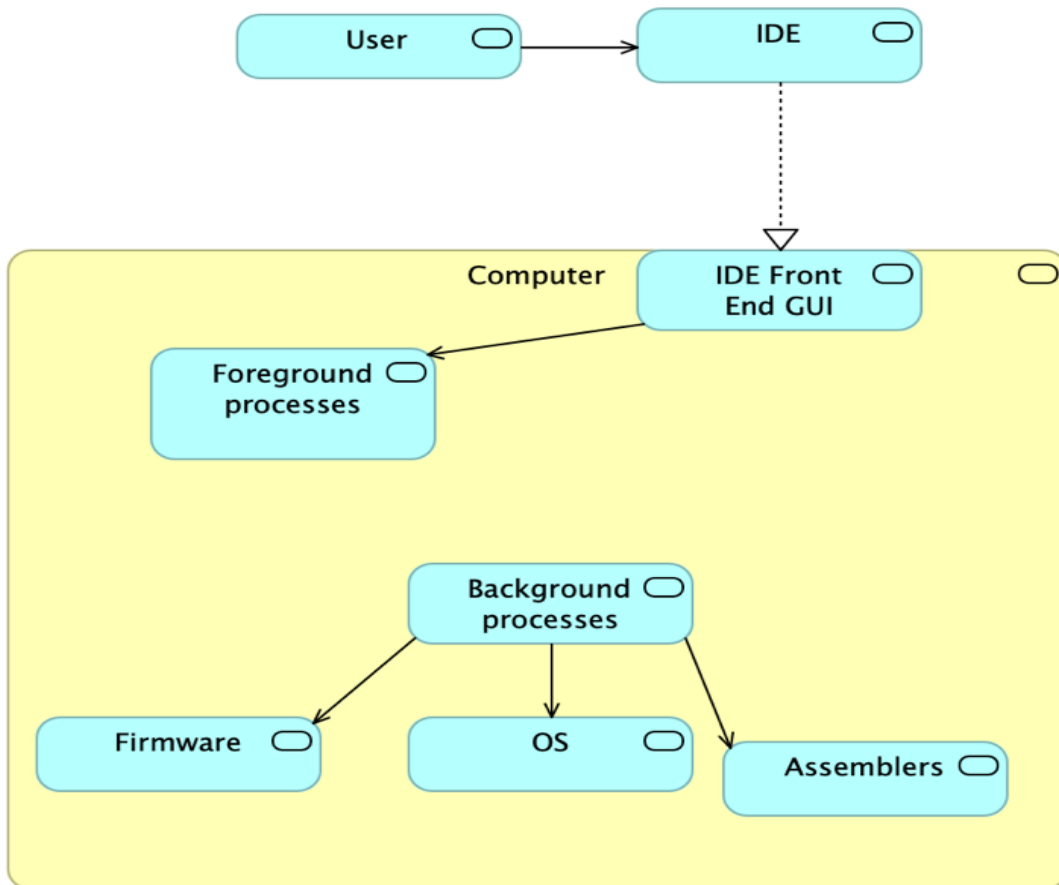
Prepared by: -
Khushal Kumar Singh

TABLE OF CONTENTS: -

The students will be able to make topic of contents, In that they will order their topics first in the end of each topic there will be summary of the topic and examples. Furthermore, the topic will end with some practice problems. In every topic each sub part is ordered with page Number.
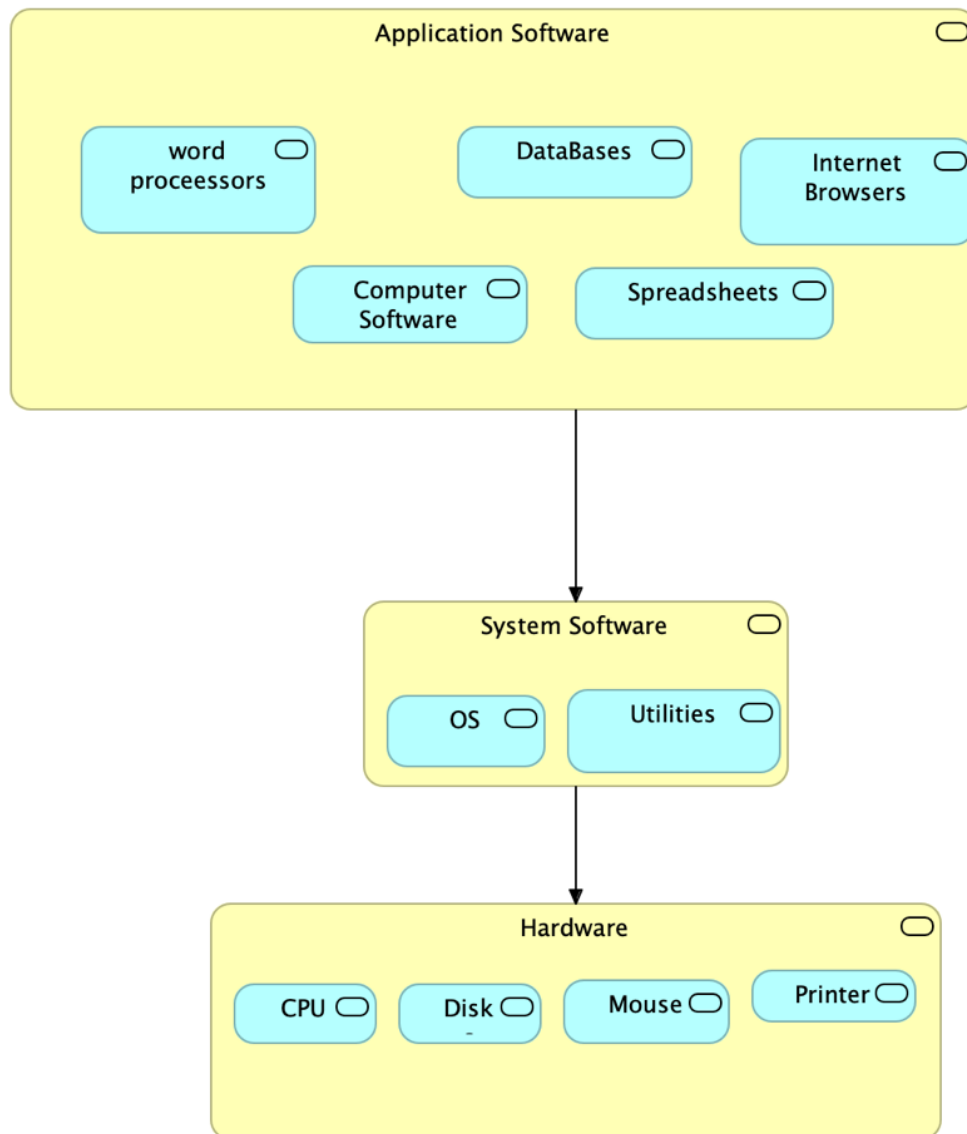
CONTENT SECTION: -

```
Content ⌂ ----------▷ Audio/Visual Content ⇨ ------------┐
                                                          ▷ Graphics space
        └----------▷ Written/Content ⇨ ------------------┘
```

The user first types the code on IDE on Computer, which has a lot of running process in background. But, the user doesn't know about it because it is not shown, and it doesn't hinder the process of IDE.

```
User ○ ──────→ IDE ○
                │
                ▽
Computer    IDE Front ○      ○
            End GUI

   Foreground ○
   processes

        Background ○
        processes
       ↙        ↓        ↘
Firmware ○      OS ○      Assemblers ○
```

1.System Programming as an example.

Application Software

word proceessors

DataBases

Internet Browsers

Computer Software

Spreadsheets

System Software

OS

Utilities

Hardware

CPU   Disk   Mouse   Printer

This above diagram illustrates how the program that user types, interacts with system and hardware of the program. The simple chunk of code interacts with system software and loaded into RAM through registers which is provided by Hardware CPU.
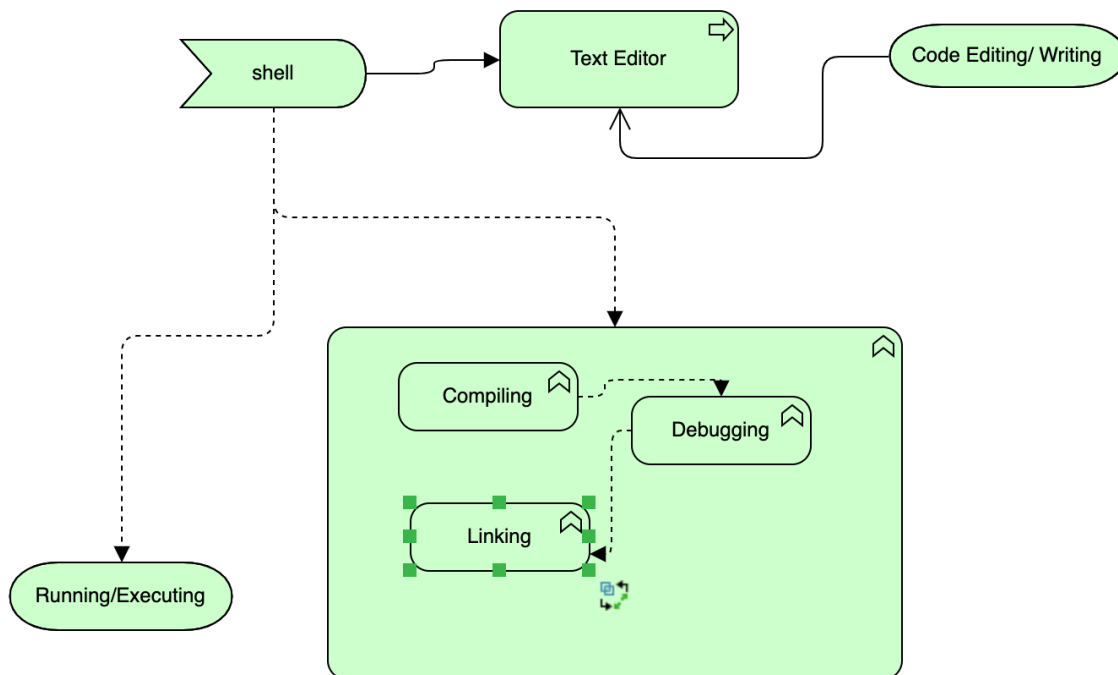
EXERCISE, EXPERIMENTATION AND PROJECT SECTION: -

User writes his first C program:-

```c
#include <stdio.h>
int main () {
        printf ("This is my first program");
        return 0;
}
```
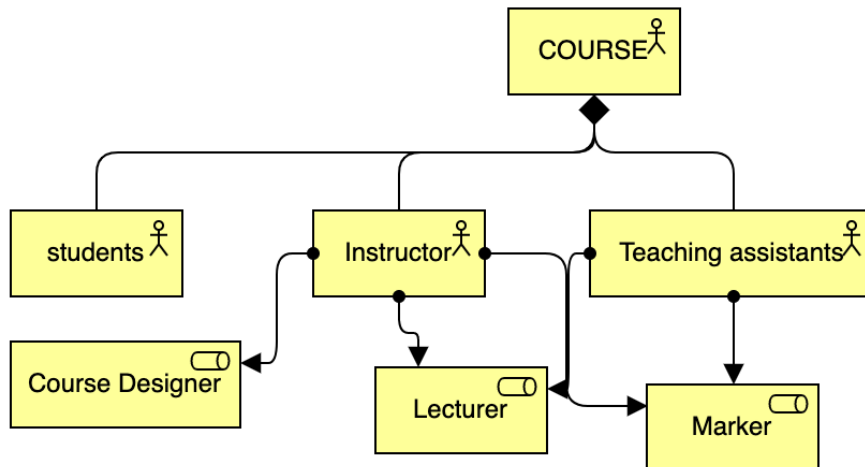
The process of complete running of the program is shown below: -
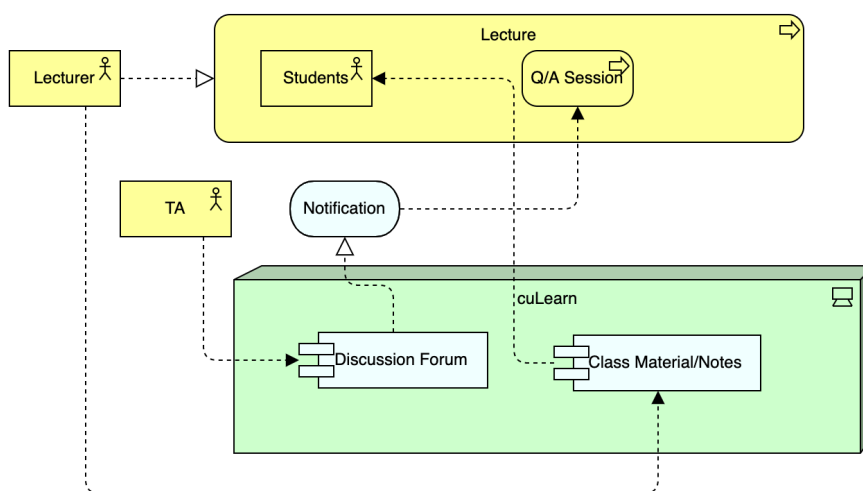
After writing code the user compiles if there's error then user debugs it. There after user compiles the code which produces bunch of object file which combines to form one executable after linking. The user is able to run the program.
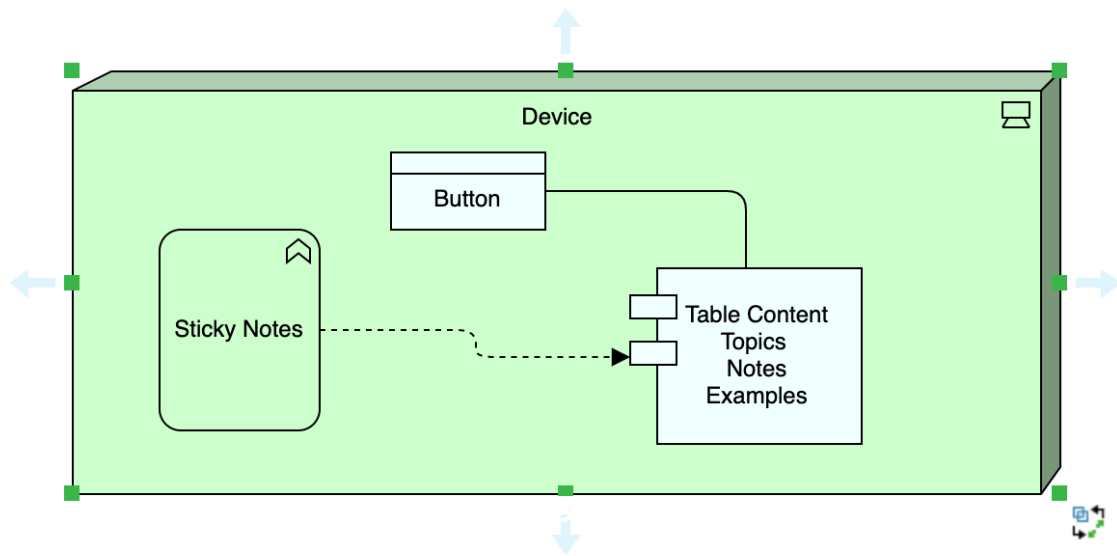
Communication Section: -

The following diagram idea is taken from Sample EA Model.

Student will be able to look at material online at cuLearn, talk to professor on discussion. Also, while the professor is in lecture these students are able to ask questions and put them in their notes. TA's can also answer the questions on discussion forum.
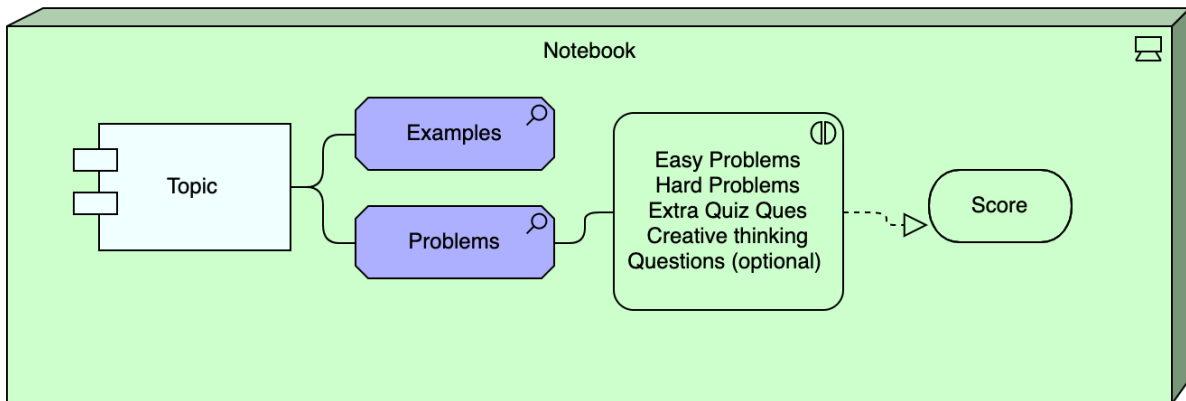
NOTATION: -

The ability to take notes in a sidebar and a legend or symbol system for navigating the textbook

The student will be able to add current notes to the notes section in the digital Notebook. Besides the notes section there's a button on which when students will click they will be able to navigate through the text book. Such as the Lecture notes, exercises, class examples, and problems.

SELF-ASSESSMENT SECTION:

When student clicks on notebook he/she has to click on the topics and then if he wants to look at examples, he can look at them otherwise if he/she wants to do the exercises problem. In the end it will give the total score the wrong question and right question.