C:/Users/chewr/OneDrive/Documents/NetBeansProjects/DSAAssignment/src/control/CourseGenerateReportMaintenance.java

```
2 package control;
 4 import adt.ArrList;
 5 import adt.ArrayStack;
 6 import adt.DoublyLinkedList;
 7 import adt.LinkedListInterface;
 8 import adt.ListInterface;
 9 import adt.StackInterface;
10 import boundary.CourseGenerateReportMaintenanceUI;
11 import dao.DAO;
12 import dao. Initializer;
13 import entity.Course;
14 import entity.CourseProgram;
15 import entity.Program;
16 import java.io.IOException;
17 import utility.Command;
18 import utility.MessageUI;
19
20 /**
21 *
22 * @author Chew Lip Sin
23 */
24 public class CourseGenerateReportMaintenance {
25
26
       private static final DAO<Course> cDAO = new DAO<>();
27
       private static final DAO<Program> pDAO = new DAO<>();
28
       private final DAO<CourseProgram> cpDAO = new DAO<>();
29
       private final Initializer in = new Initializer();
30
31
       public void runCourseGenerateReportMaintenance() throws IOException,
InterruptedException {
32
           LinkedListInterface<CourseProgram> cp = new DoublyLinkedList<>();
33
           ListInterface<Course> courses = new ArrList<>();
34 //
            cp = in.CourseProgramInitializer();
35 //
             cpDAO.saveToFile(cp, "courseProgram.dat");
36
           cp = cpDAO.dLLRetrieveFromFile("courseProgram.dat");
37
           courses = cDAO.retrieveFromFile("course.dat");
           CourseGenerateReportMaintenanceUI cReportUI = new
CourseGenerateReportMaintenanceUI(cp, courses);
39
40
           int choice;
41
           System.out.println("\n\n");
42
           do {
43
               Command.cls();
44
               cReportUI.displayHeader();
```

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```
cReportUI.displayReportMenu();
46
                choice = cReportUI.getChoices();
47
                switch (choice) {
48
49
                    case 0:
50
                        break;
51
                    case 1:
52
                        generateCourseProgramReport();
53
                        break;
54
                    case 2:
55
                        generateCourseReport();
56
                        break;
57
                    default:
58
                        MessageUI.displayInvalidChoiceMessage();
59
60
            } while (choice != 0);
61
62
63
       private void generateCourseProgramReport() throws IOException, InterruptedException
64
65
           LinkedListInterface<CourseProgram> cp = new DoublyLinkedList<>();
66
           ListInterface<Course> courses = new ArrList<>();
           cp = cpDAO.dLLRetrieveFromFile("courseProgram.dat");
67
           courses = cDAO.retrieveFromFile("course.dat");
68
69
           CourseGenerateReportMaintenanceUI cReportUI = new
CourseGenerateReportMaintenanceUI(cp, courses);
70
            cReportUI.progress();
71
           cReportUI.displayCoursePReportHeader();
72
73
           cReportUI.displayCourseProgramReport();
74
       }
75
76
       private void generateCourseReport() {
77
           LinkedListInterface<CourseProgram> cp = new DoublyLinkedList<>();
78
           ListInterface<Course> courses = new ArrList<>();
79
           StackInterface<String> choice = new ArrayStack<>();
80
           StackInterface<String> arrangeChoice = new ArrayStack<>();
           String line = "";
81
82
           boolean report = false;
83
           cp = cpDAO.dLLRetrieveFromFile("courseProgram.dat");
           courses = cDAO.retrieveFromFile("course.dat");
84
           CourseGenerateReportMaintenanceUI cReportUI = new
CourseGenerateReportMaintenanceUI(cp, courses);
86
           choice = cReportUI.getCourseReportMenu(choice);
            for (int i = 0; i < 65; i++) {
87
                line += "-";
88
```

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C:/Users/chewr/OneDrive/Documents/NetBeansProjects/DSAAssignment/src/control/CourseGenerateReportMaintenance.java

```
90
            if (!choice.isEmpty()) {
 91
                cReportUI.progress();
 92
                cReportUI.displayCourseReportHeader();
 93
 94
            while (!choice.isEmpty()) {
 95
                arrangeChoice.push(choice.pop());
 96
 97
            while (!arrangeChoice.isEmpty()) {
 98
                String choice2 = arrangeChoice.pop();
 99
                if (choice2.equals("Course Code Report")) {
100
                    cReportUI.displayCourseCodeReport();
101
                }
102
103
                if (choice2.equals("Credit Hour Report")) {
104
                     cReportUI.displayCreditHoursReport();
105
                }
106
107
                if (choice2.equals("Semester Report")) {
108
                    cReportUI.displayCourseSemesterReport();
109
110
                report = true;
111
112
113
            if (report) {
114
                System.out.println("\t\t\" + line);
115
                cReportUI.displayReportFooter();
116
                System.out.println("");
117
                System.out.print("\t\t\t");
118
                Command.pressEnterToContinue();
119
            }
120
121 }
```

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