



AXOLOTL DEVELOPMENT

SHIRA WEIN, ERIK LAUCKS,
MICHAEL WELLNITZ & DREW CARLETON

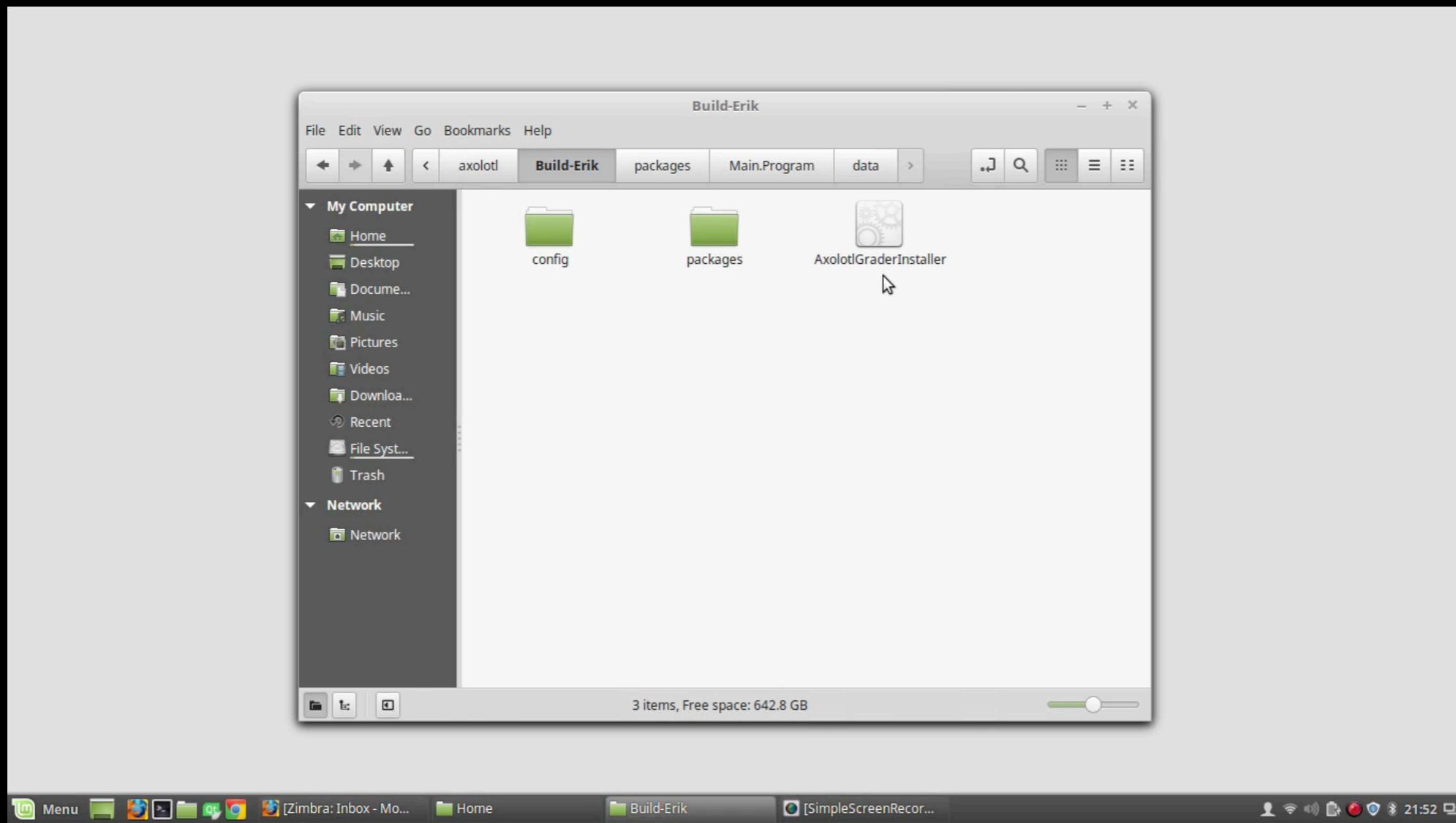
PROBLEM DEFINITION

The problem is to design a tool to facilitate grading labs in Intro and Intro II. This includes an interface that allows for viewing, commenting and scoring code better than the current system. It also includes a solution for backing up, sharing, and exporting work.

REQUIREMENTS

1. This tool provides a mechanism which enables me to more efficiently **provide feedback via comments** and effectively convey them to the student
2. The tool would ideally have selected sections of code and the ability to **comment directly**
3. **Feedback** should be able to be provided and removed
4. **Auto-completion** for past comments would make feedback more quickly providable
5. Ability to incorporate points, or a **rubric uploading feature**, as to maintain the distribution of points across labs
6. Can import rubrics into the software or **create new rubrics** within the interface
7. Grading must be **anonymized**
8. Must be able to work **offline**
9. Need to be able to access a shared **data archival mechanism**
10. The software should be able to be **installable on and compatible** with different monitor configurations and operating systems
11. A **final report** needs to be generated for student grades, exporting the grades to a separate spreadsheet
12. **Report for student use** with feedback included
13. Can **access code and the rubric simultaneously**, without having to switch between one and the other
14. Should be able to **update and save my progress**

PROGRAM INSTALLATION



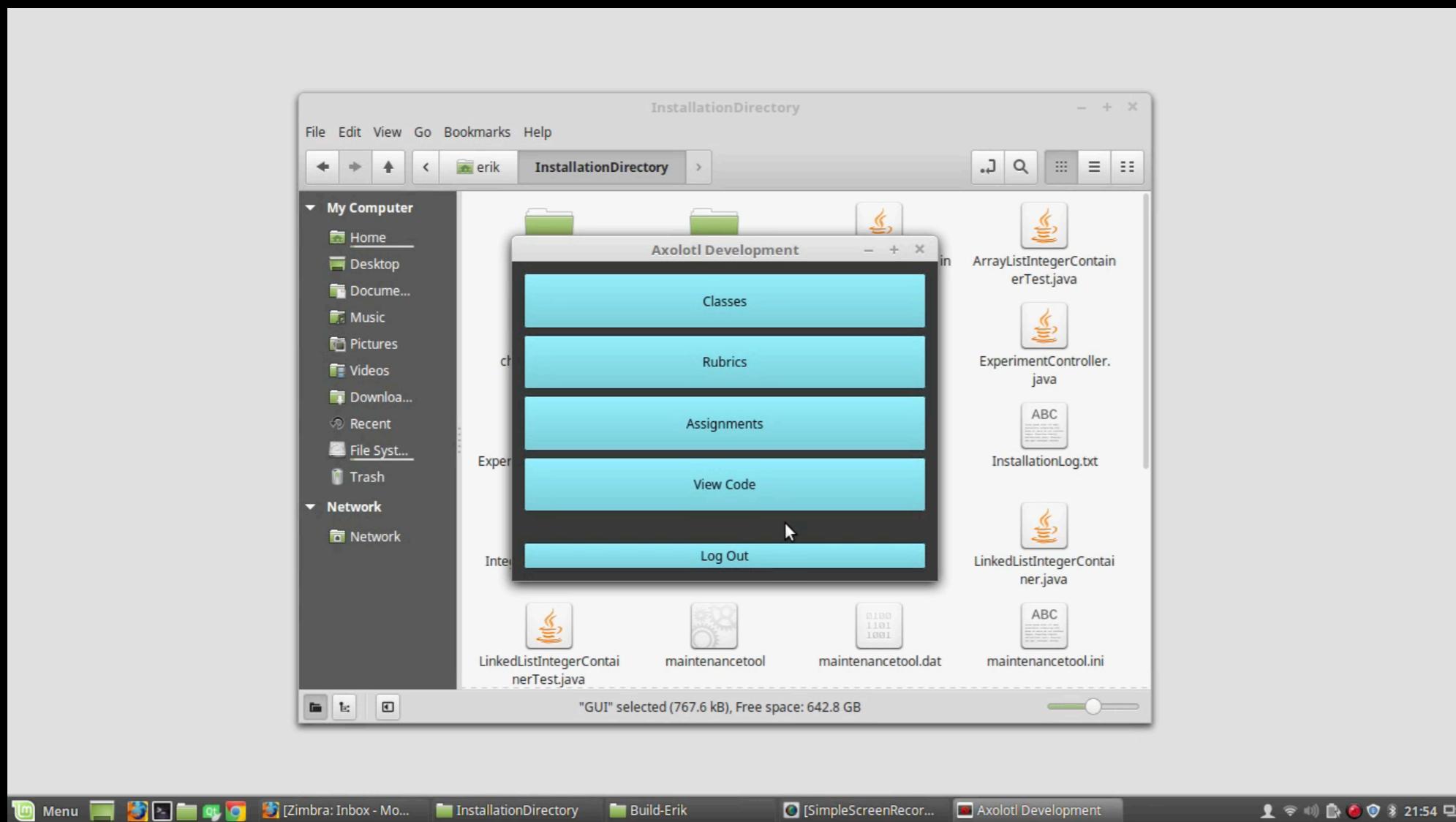
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INSTALLATION

- ▶ Employ an offline installation program with package removal, via full uninstallation
 - ▶ open source Qt Installer Framework v2.05
- ▶ Files handled locally rather than calling a remote repository and install additional maintenance tool
- ▶ Ability to remove packages
- ▶ Uninstalling the program does not cause loss of user data
 - ▶ all data leading up to the last back up to the repository is saved remotely

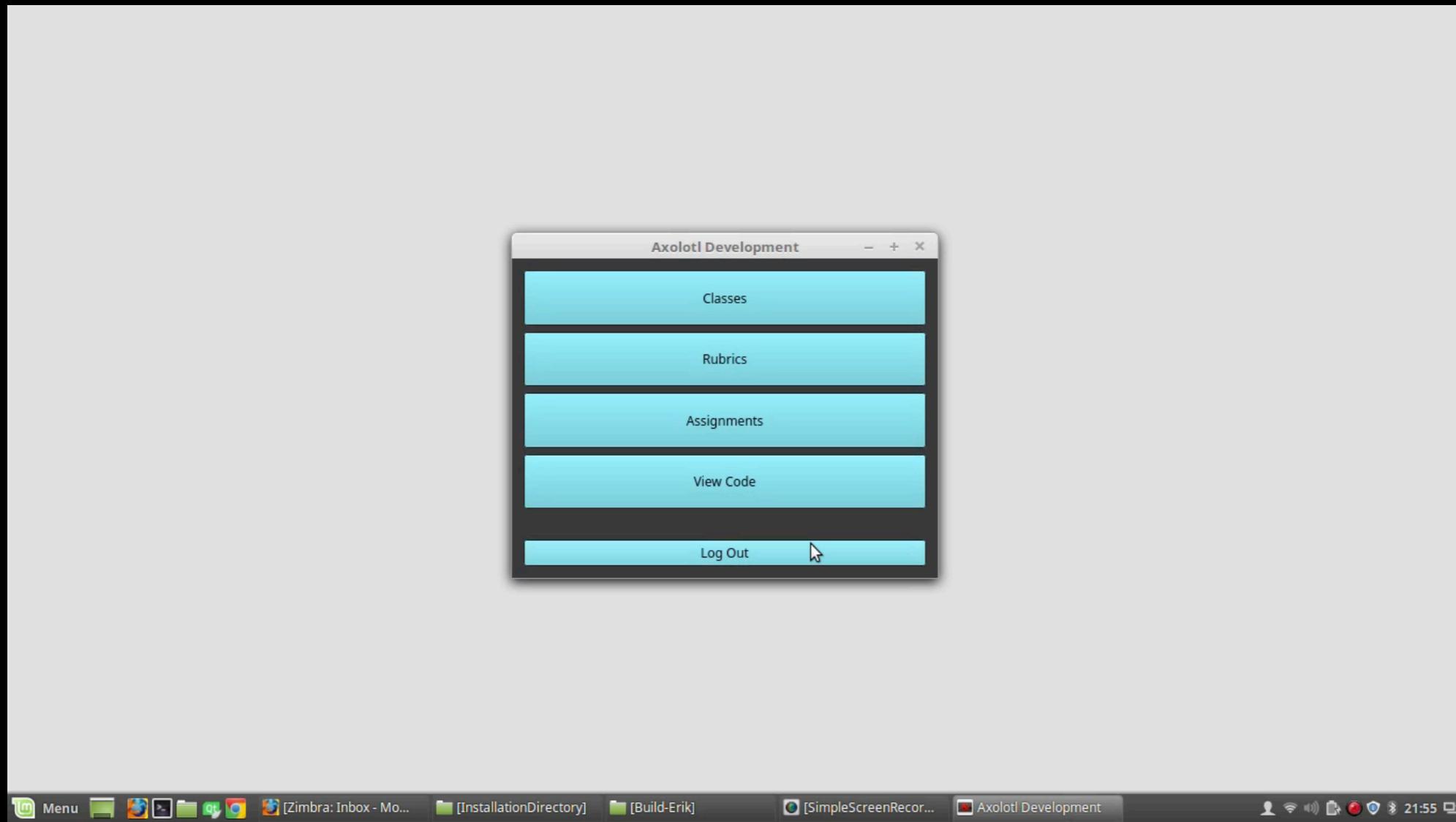
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CLASS CREATION & STUDENT IMPORTATION



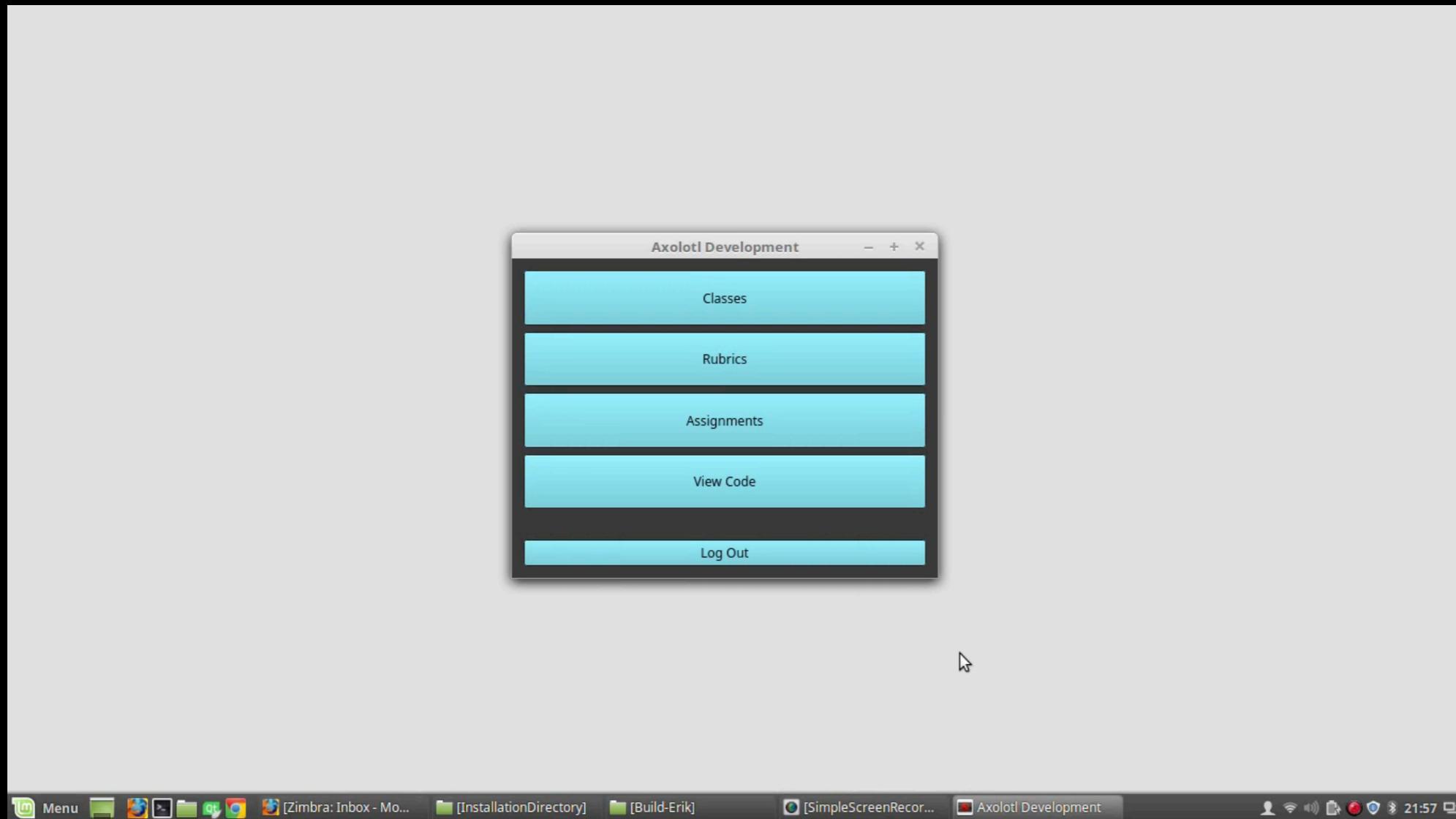
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IN-PROGRAM RUBRIC CREATION



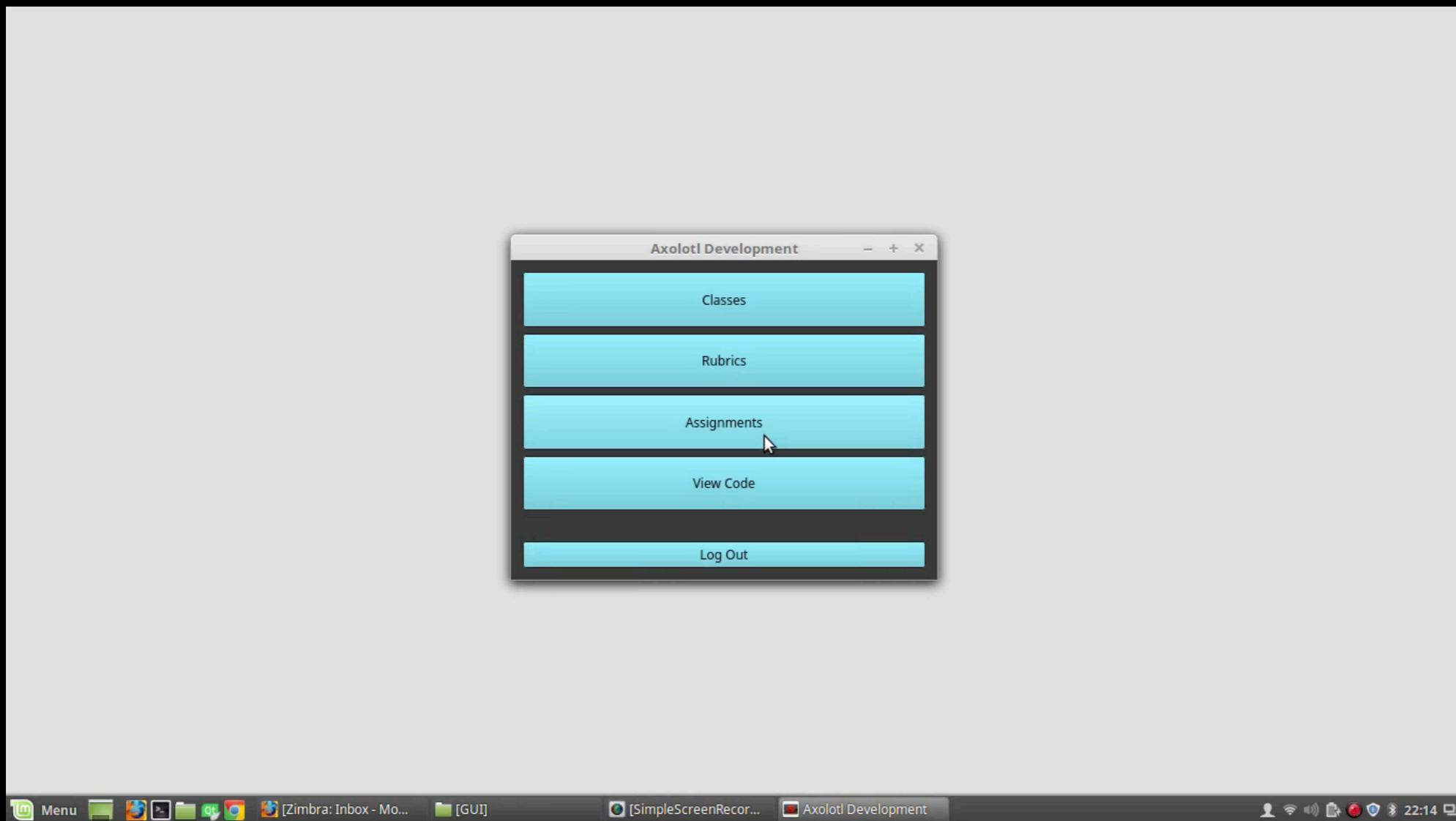
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RUBRIC IMPORTATION



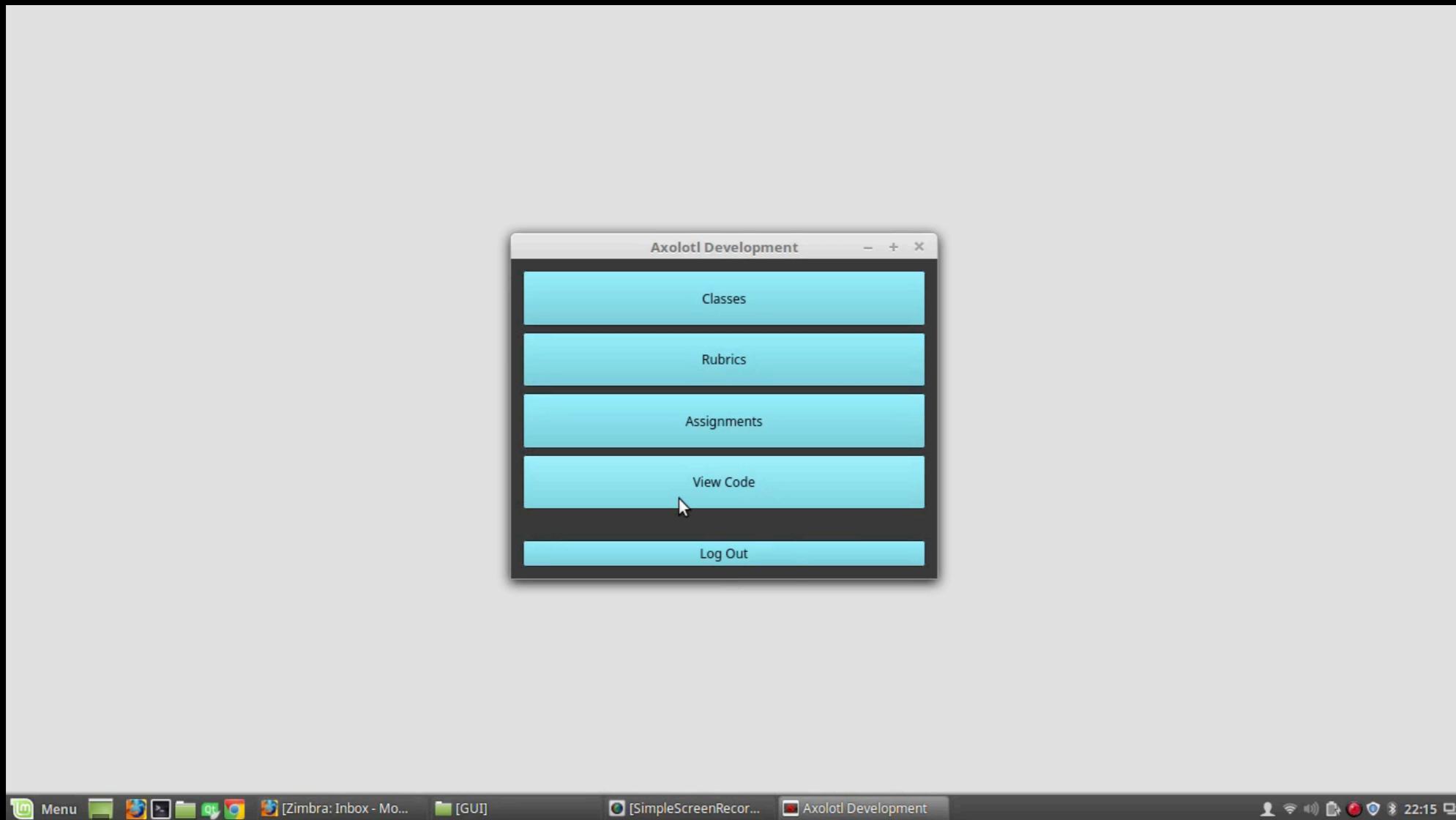
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ASSIGNMENT CREATION & SUBMISSION UPLOAD



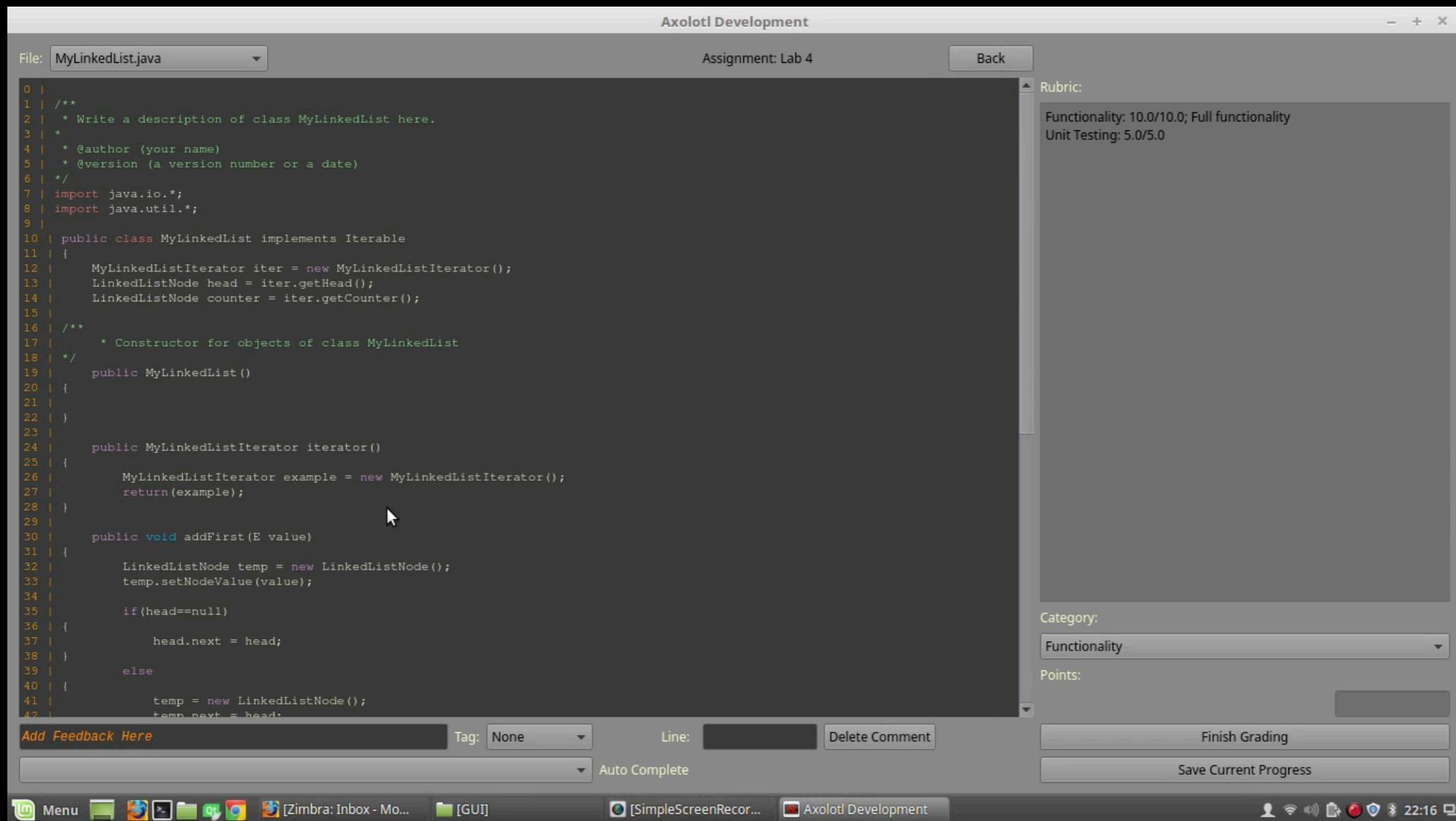
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TEXT VIEW



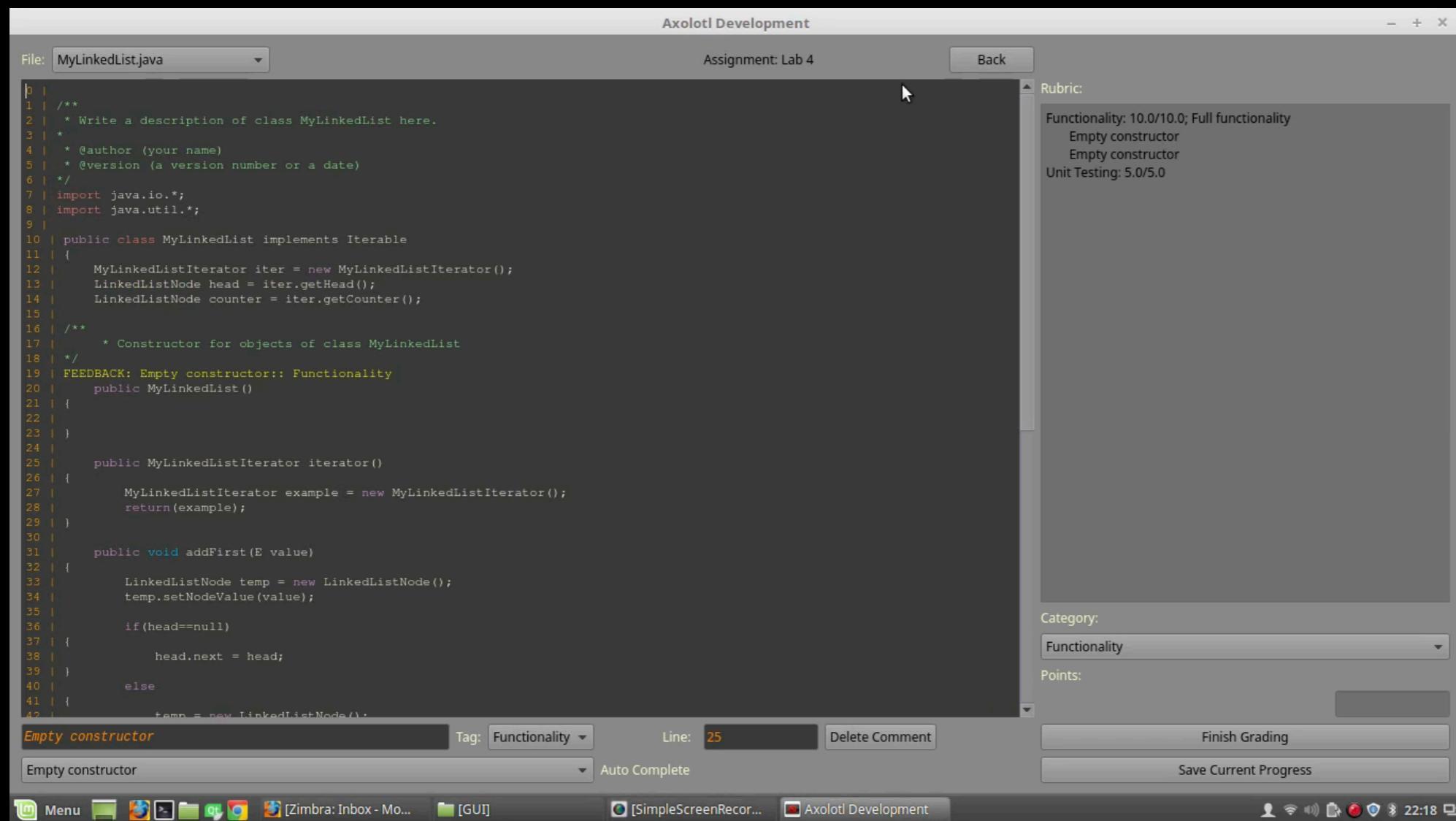
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ADDING & EDITING FEEDBACK



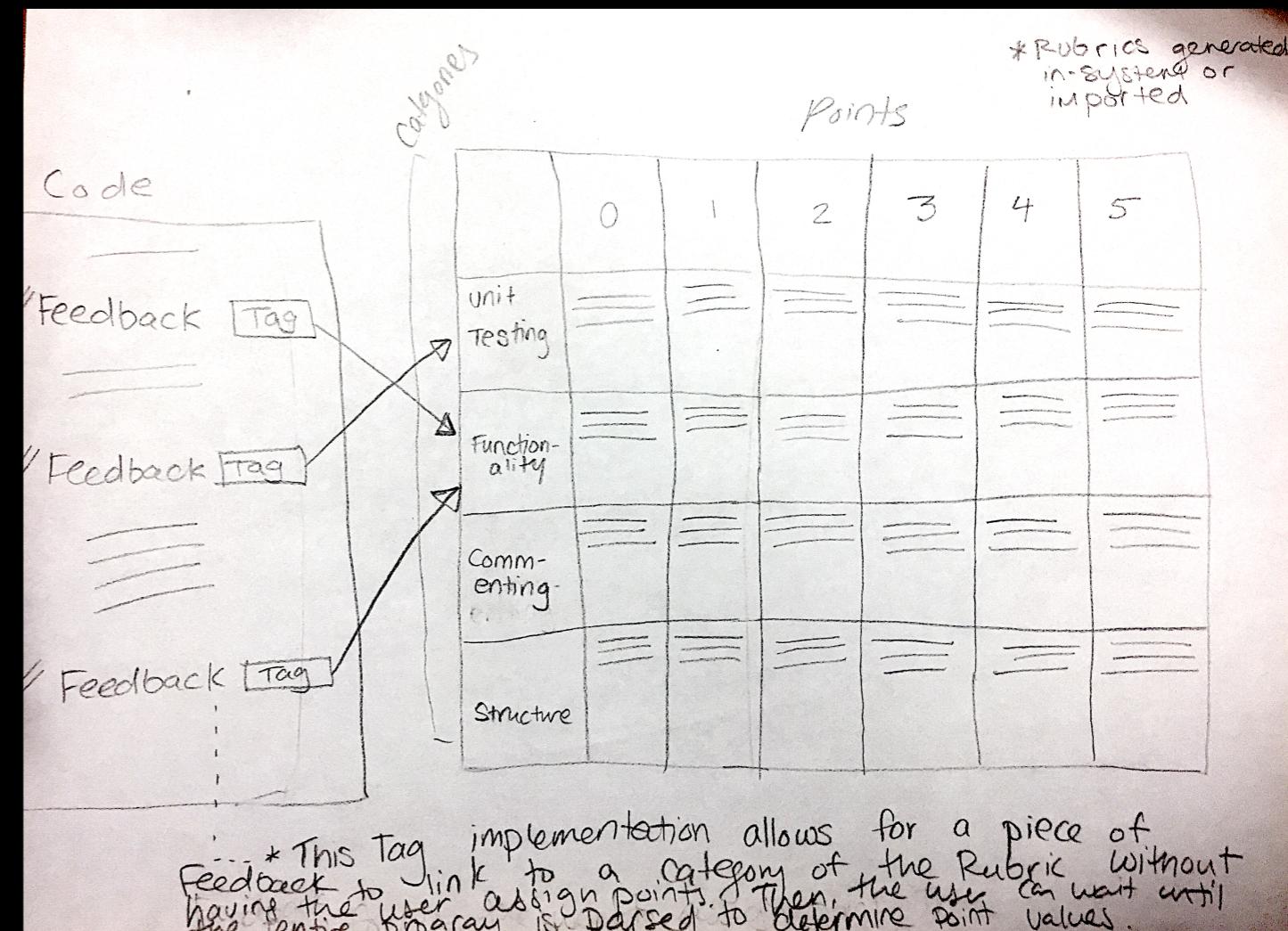
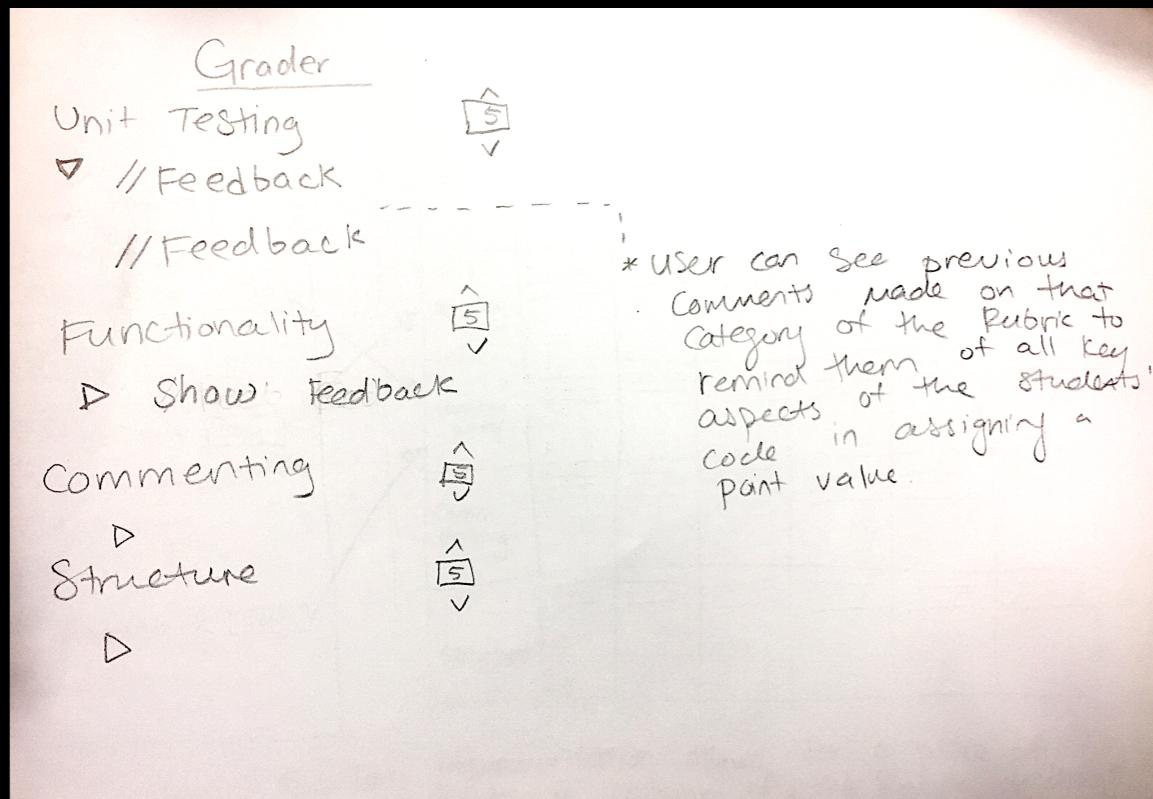
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FEEDBACK LINKED WITH GRADING

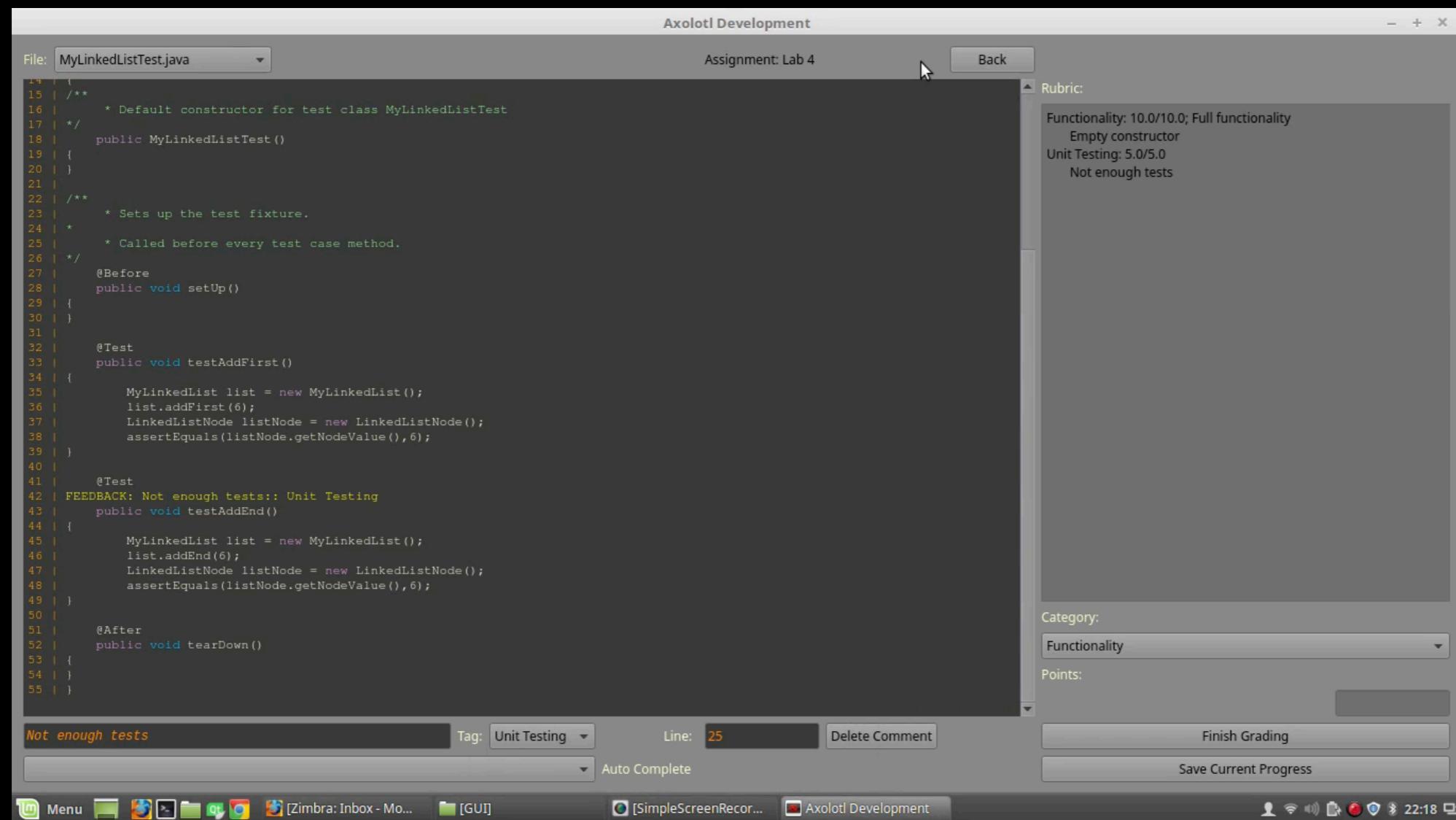


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GRADING & FEEDBACK INTEGRATION: PROCESS

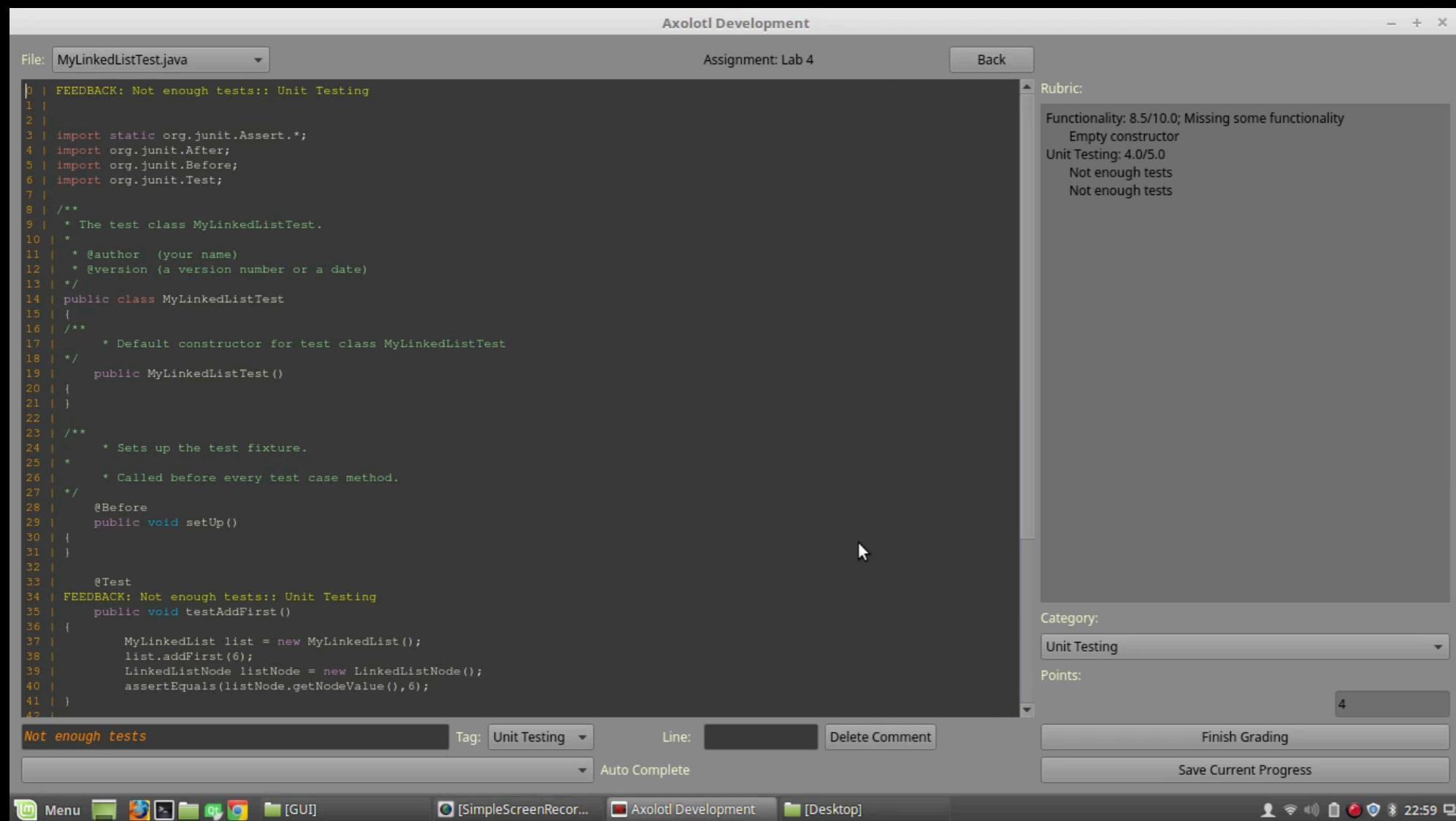


GRADING IN-PROGRAM



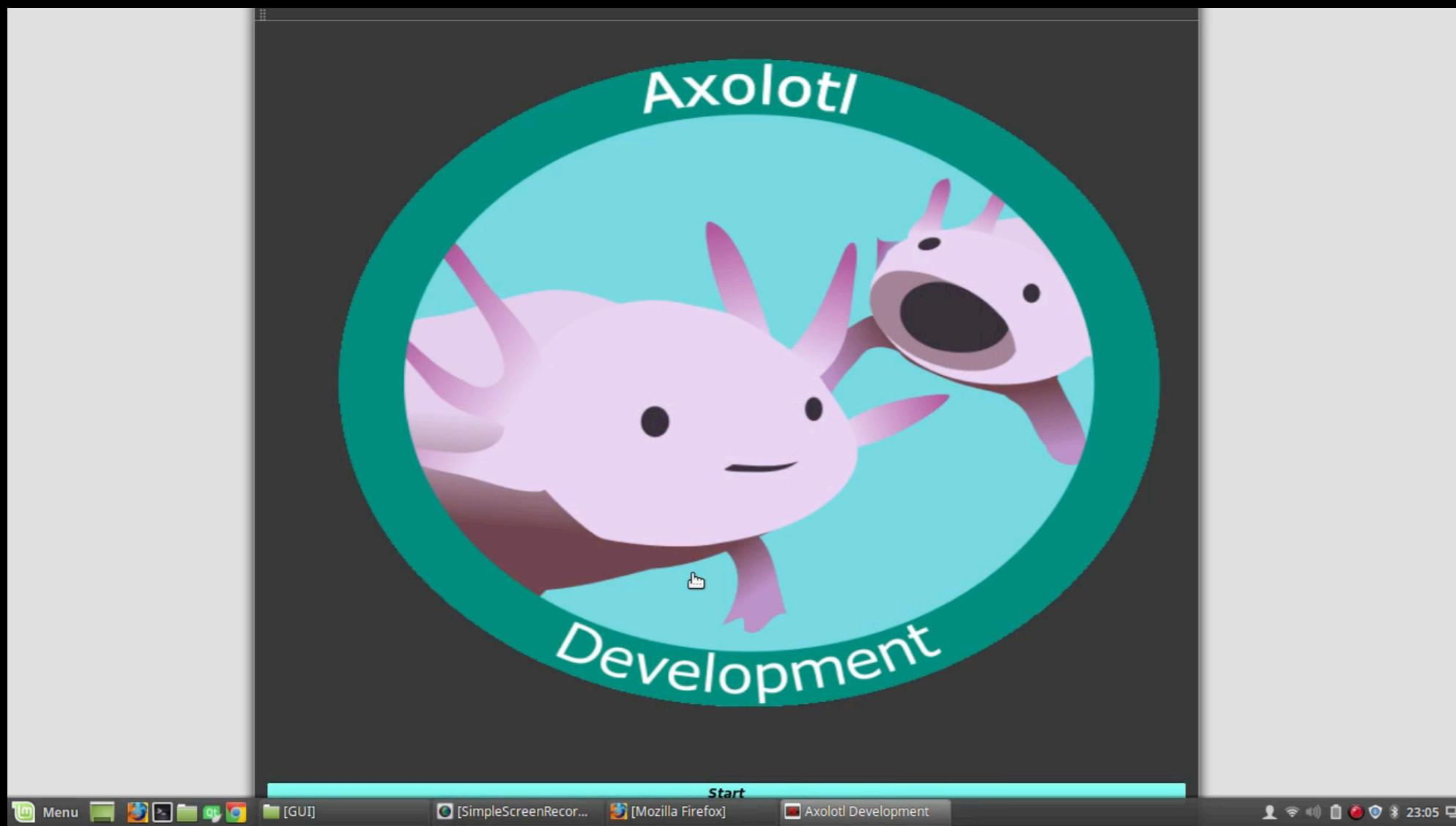
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USER-CONTROLLED SAVING



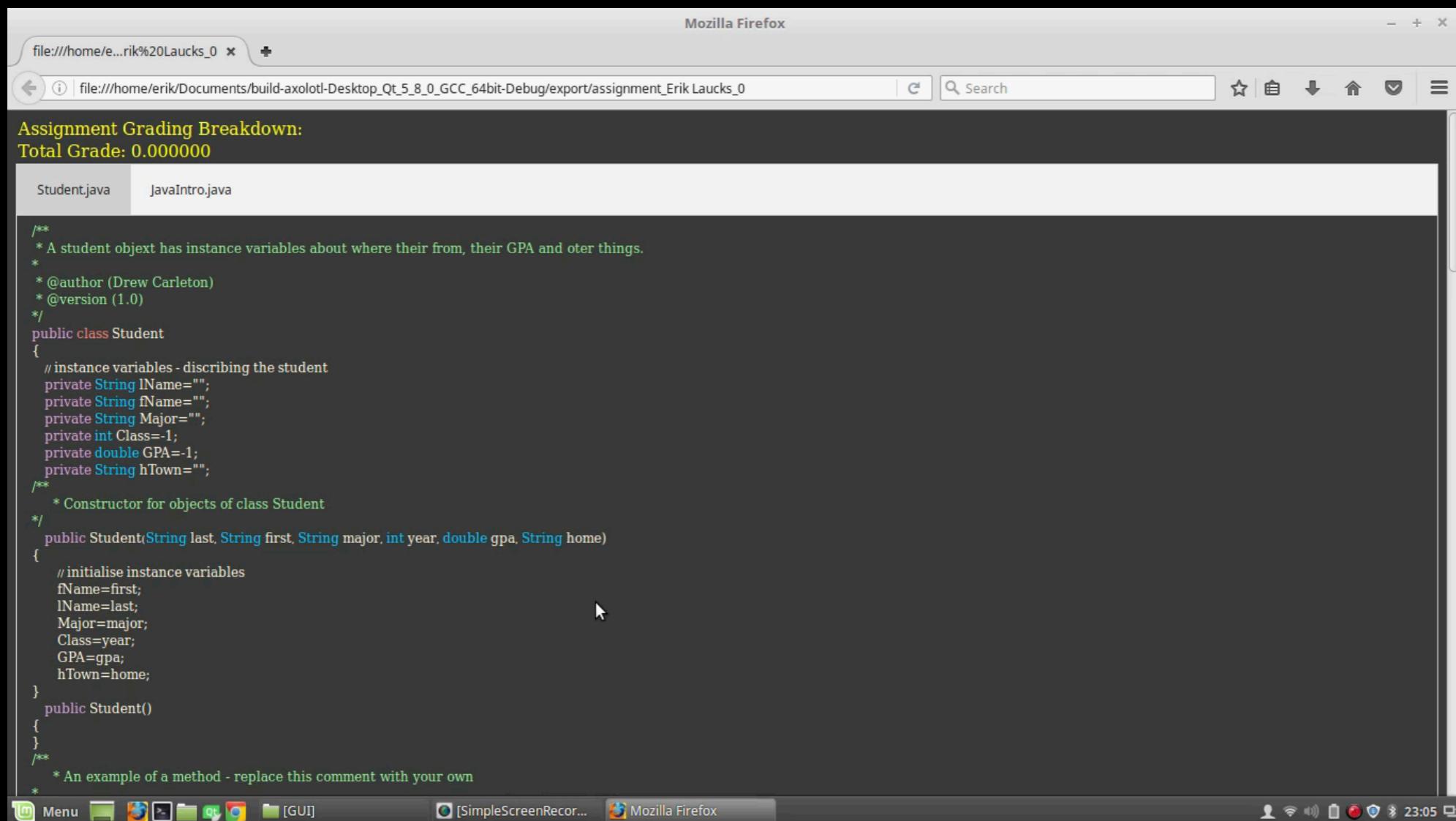
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SELECTING TO EXPORT



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EXPORTED FILE



A screenshot of a Mozilla Firefox browser window showing a Java code file. The title bar says "file:///home/erik%20Laucks_0". The address bar shows the URL "file:///home/erik/Documents/build-axolotl/Desktop_Qt_5_8_0_GCC_64bit-Debug/export/assignment_Erik Laucks_0". The page content displays the following Java code:

```
Assignment Grading Breakdown:  
Total Grade: 0.000000  
  
Student.java JavaIntro.java  
  
/**  
 * A student object has instance variables about where their from, their GPA and other things.  
 *  
 * @author (Drew Carleton)  
 * @version (1.0)  
 */  
public class Student  
{  
    // instance variables - describing the student  
    private String lName="";  
    private String fName="";  
    private String Major="";  
    private int Class=-1;  
    private double GPA=-1;  
    private String hTown="";  
    /*  
     * Constructor for objects of class Student  
     */  
    public Student(String last, String first, String major, int year, double gpa, String home)  
    {  
        // initialise instance variables  
        fName=first;  
        lName=last;  
        Major=major;  
        Class=year;  
        GPA=gpa;  
        hTown=home;  
    }  
    public Student()  
    {  
    }  
    /*  
     * An example of a method - replace this comment with your own  
     */
```

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STATISTICS FOR PROFESSOR

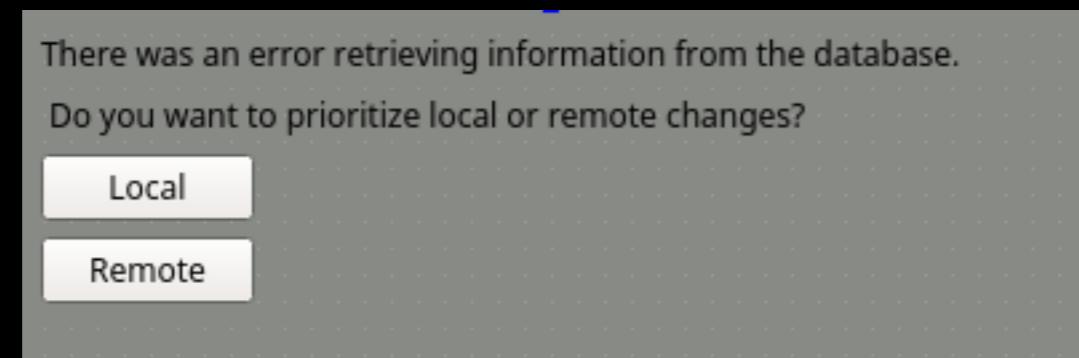
	A	B	C	D
1	Example Class			
2	Student Name	Example Assignment	lab 3	
3	Drew Carleton	10	10	Average Student Grade: 10
4	Shira Wein	0	0	Average Student Grade: 0
5	Erik Laucks	0	0	Average Student Grade: 0
6	Average Assignment Grades	10	10	Average Section Grade: 3.33333
7				
8				
9				
10				

	A	B	C
1	TestAssignment0		
2	Student Name	Grade	
3	Student 0	25	
4	Student 1	25	
5	Student 2	25	
6			
7			

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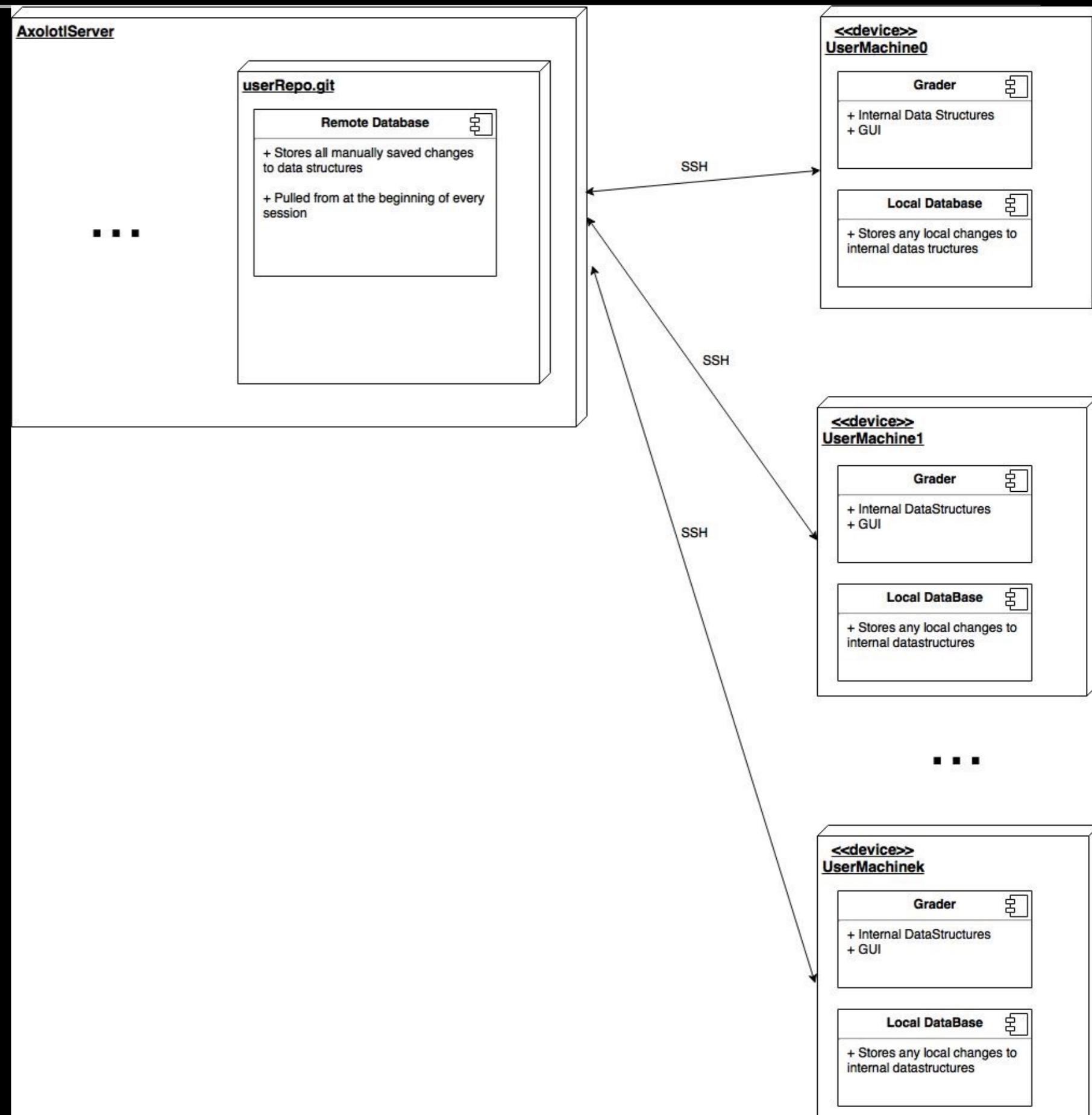
DATA ARCHIVAL

- ▶ All user created data (rubric, assignments, students, and comments) is saved into database
 - ▶ At startup, all structures present in database are regenerated
- ▶ Remote database serves as backup and as method of progress transferal between machines
- ▶ Local changes to database are not pushed to remote unless the user chooses to do so through manual saving process
- ▶ Pull the remote database from the repository on command
 - ▶ User can choose to revert to the remote version or make their changes permanent



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PHYSICAL VIEW



PROGRAM RESIZABILITY



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