Brief Introduction

This is a simple poll system (functioning just like Poll Everywhere but is a simpler version) that contains two ends: the teacher's end (the server) and the student's end (the client).

On the teacher's end, after the program is started, a window pops out, which will request the user to provide a database address, the name of the table, the username, and the password. If everything is correct, then the answer to the poll will be uploaded to the table in the database. If the information provided by the user has something wrong, or nothing is provided, then the user can still use the program, but the answer will not be uploaded. The database can be set up later.

Then, the next thing the teacher needs to do is set the question; before that, nothing can be done. The teacher must provide the question, choices A to D, and the identifier of the question. After that, the teacher is allowed to start the server (on Port 1919), and the question and its choices will be sent to the connected student's end. Meanwhile, a thread of the message-listener is started to hear from the student's end, and the answer will be added to a thread-safe ArrayList.

When the teacher stops the server, ALL client sockets will be closed, meaning that students' answers cannot be received (NO LATE SUBMISSION). Only after the server is stopped can the teacher edit the question and download the records in text format. The teacher can view the pie chart anytime they want.

On the student's end, after being started, a connection window will pop out. The student needs to fill in the IP address provided by the teacher. Then, a socket will start, and the question and its choices will be received from the teacher's end. The question and its choices will be rendered on the main window. The student [must] fill in their name and make a choice. After submitting, the teacher will receive the answer and the student's name in the following format:

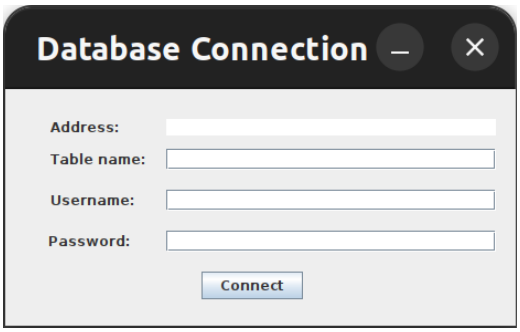
"[ans]\t[name]"

After the answer is submitted, the student will have no chance to answer the question unless they re-run the client. After the teacher closes the server, no answer will be received by the teacher (NO LATE SUBMISSION).

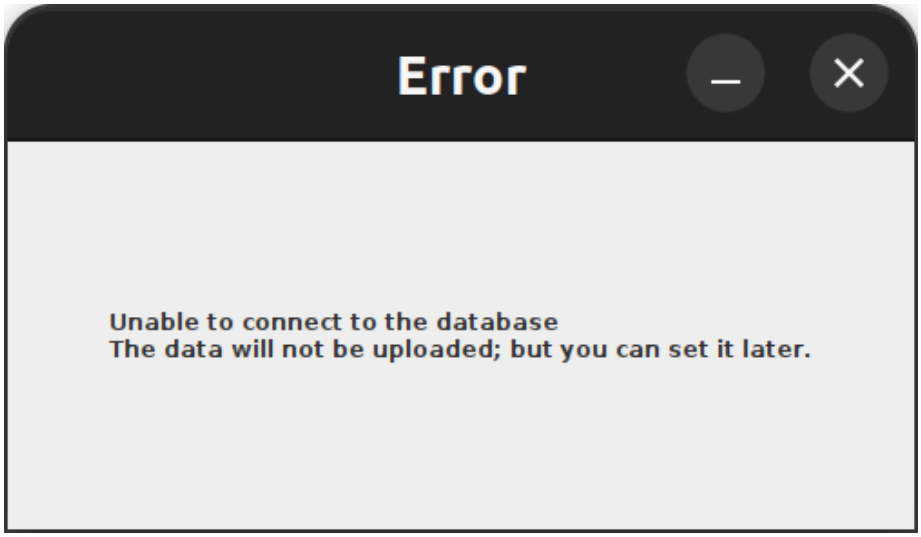
Screenshots

1. Teacher's End

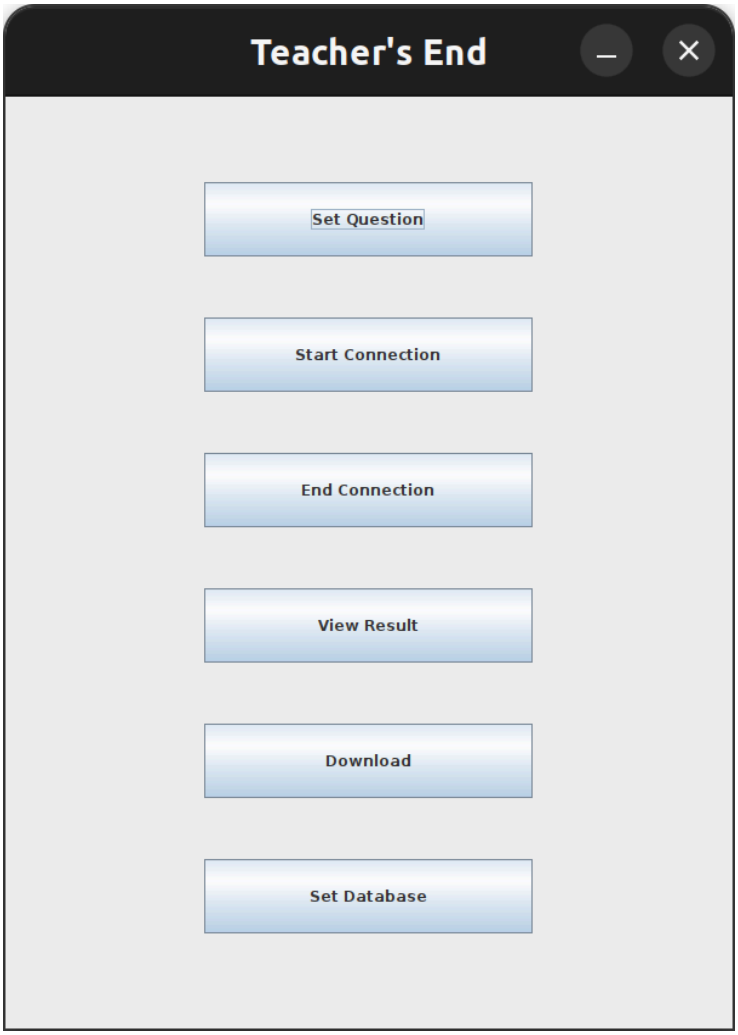
The Database Connection window. Users can fill in these fields to connect to the database.



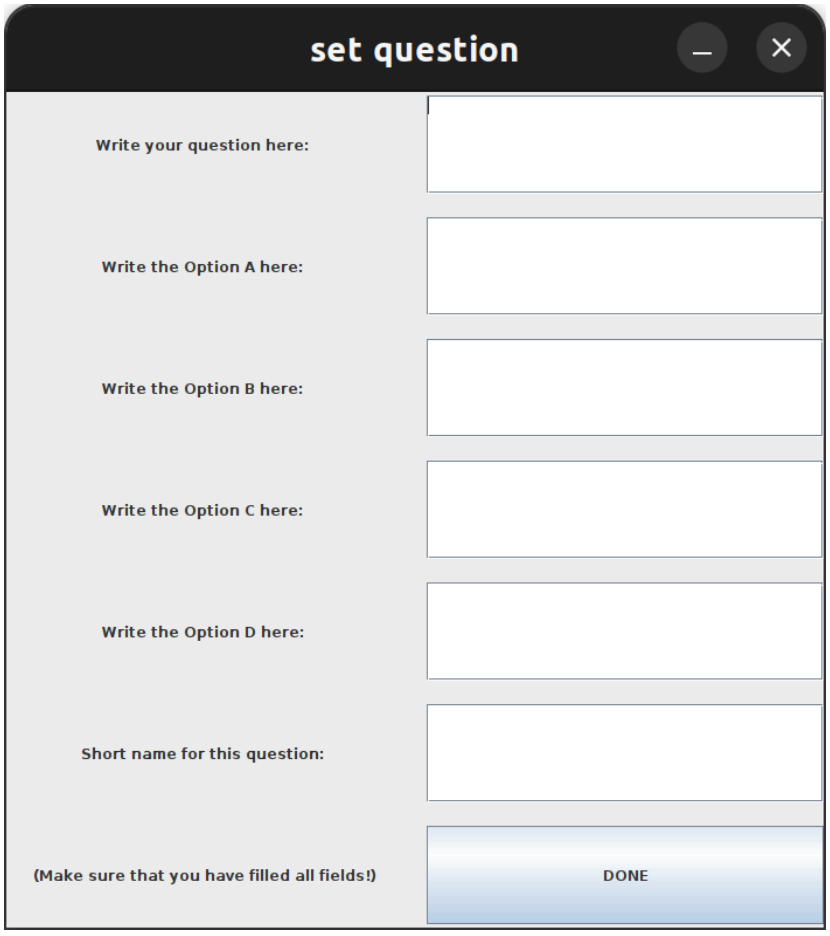
If something is wrong in connecting to the database, then there will be a window like this:



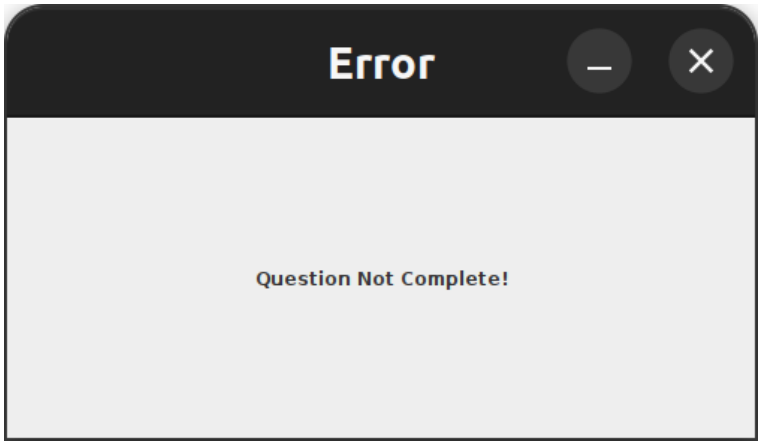
The main window of the teacher's end:



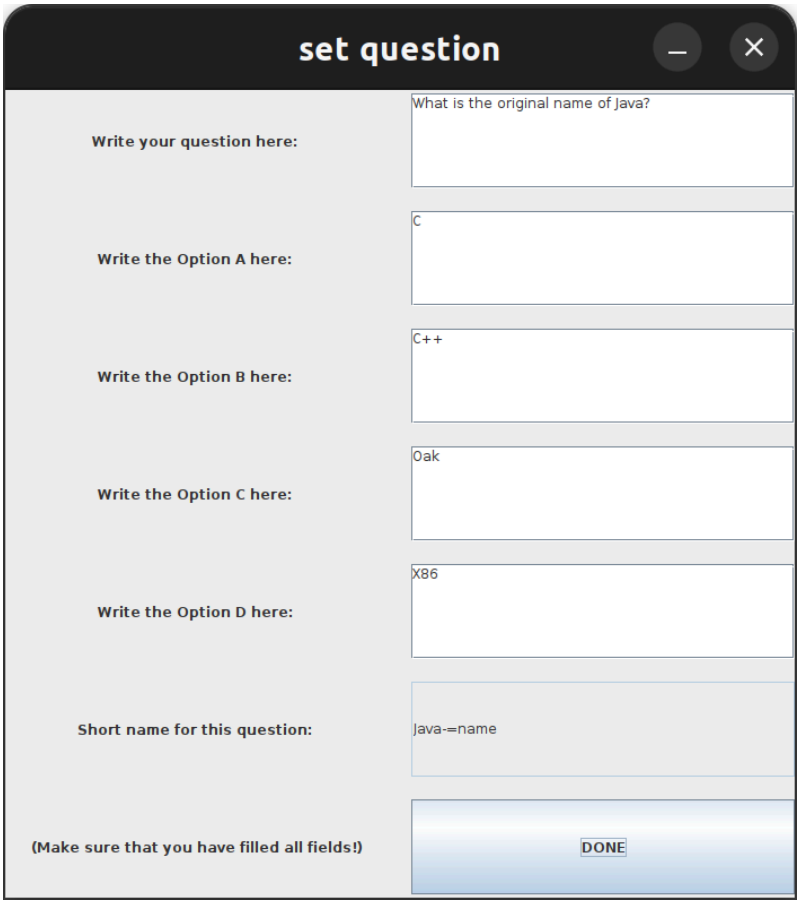
This window will pop out after clicking on the "Set Question" button:



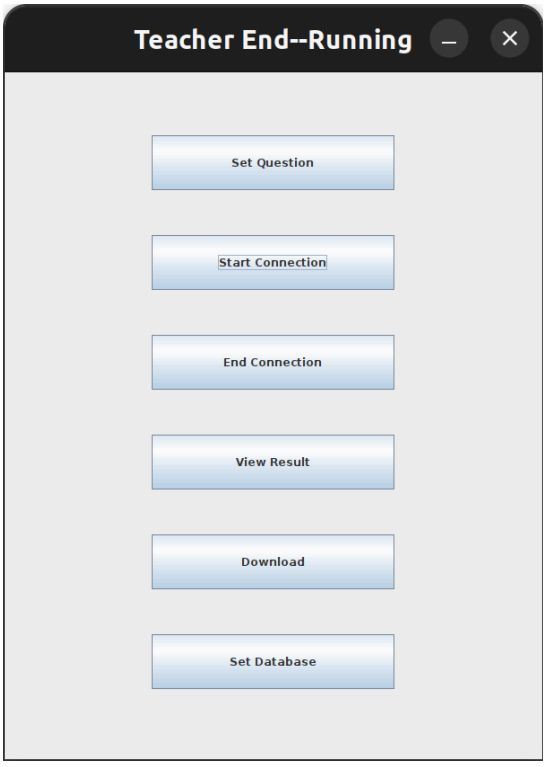
If any of the fields remain unfilled, then an error message will appear:



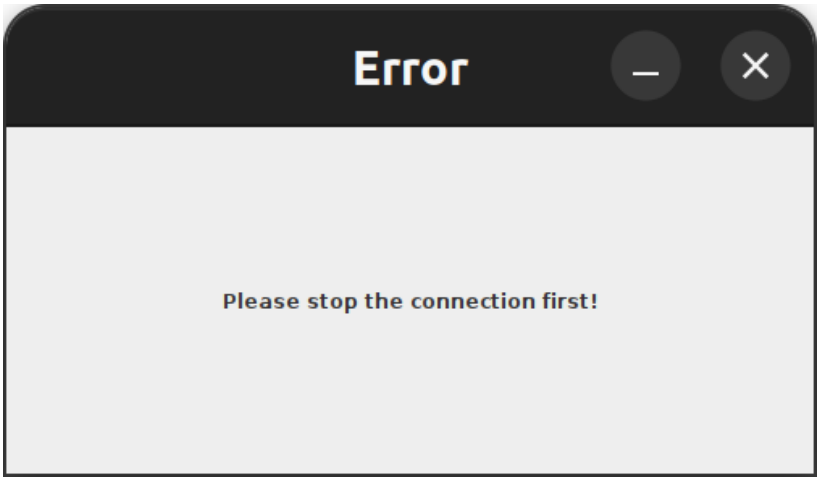
After setting the question and answer for the first time, the user will not be allowed to change the short name field when editing thereafter.



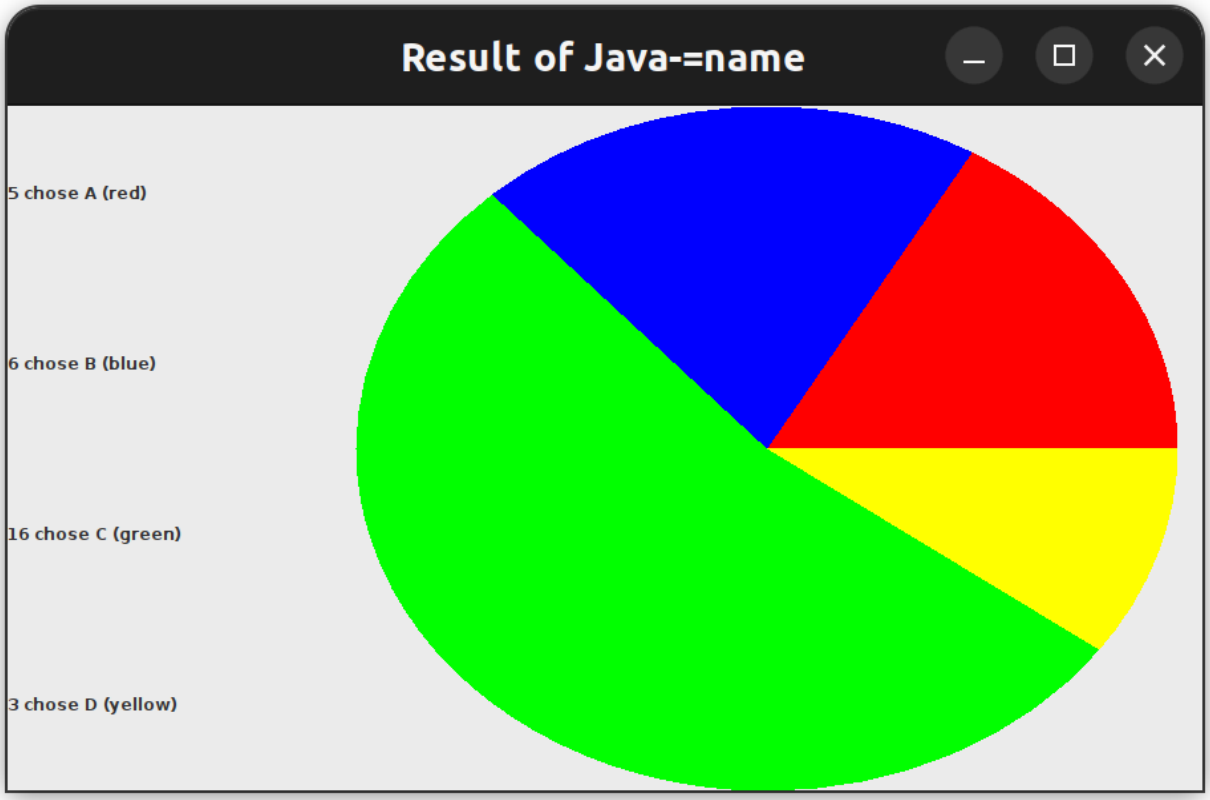
After the question is set, the teacher can start the server, the window will look like this:



At this moment, the teacher can neither change the question nor download the .txt records.



The teacher can view the pie chart, which looks like this:



After stopping the connection, the teacher can download the .txt records with the file name in the format “[MM-DD-YYYY] [H:MIN:SEC]_[Question ID].txt” to the current working directory. The records file will look like this:

Student.java | 05-02-2024 10:55:00_Java-=name.txt | Teacher.java

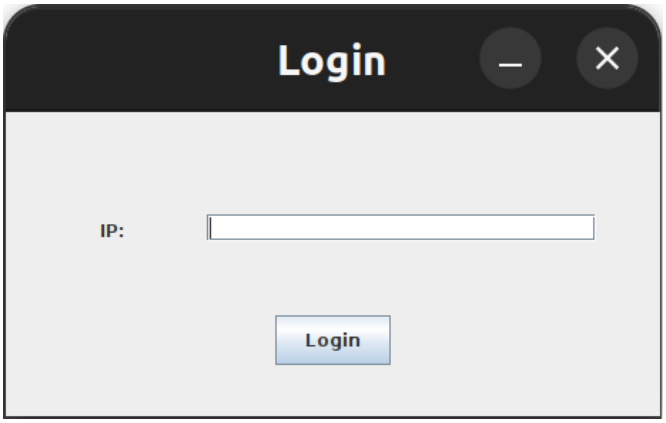
```
05-02-2024 10:55:00
Q: What is the original name of Java?
A: C
B: C++
C: Oak
D: X86
There are 30 student(s) answered the question.
5 student(s) chose A
6 student(s) chose B
16 student(s) chose C
3 student(s) chose D
------------------------------------------------------------

Option | name
C   Public
B   Mike
A   Alice
C   Ben
C   Charles
C   Edward
D   Darles
B   Frank
C   Georegez
A   Harry
C   Irk
D   Jeff
```

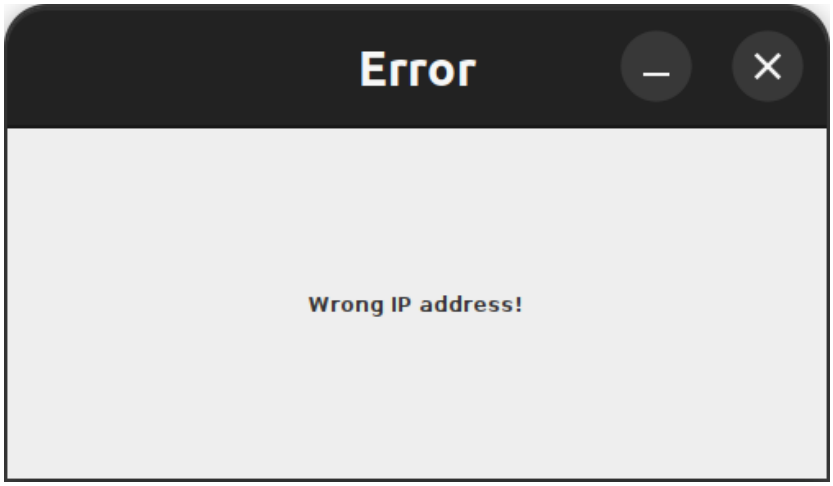
Clicking on the button “set database” will let the database GUI appear again, and then the user can add or change the database settings.

2. Students’ End

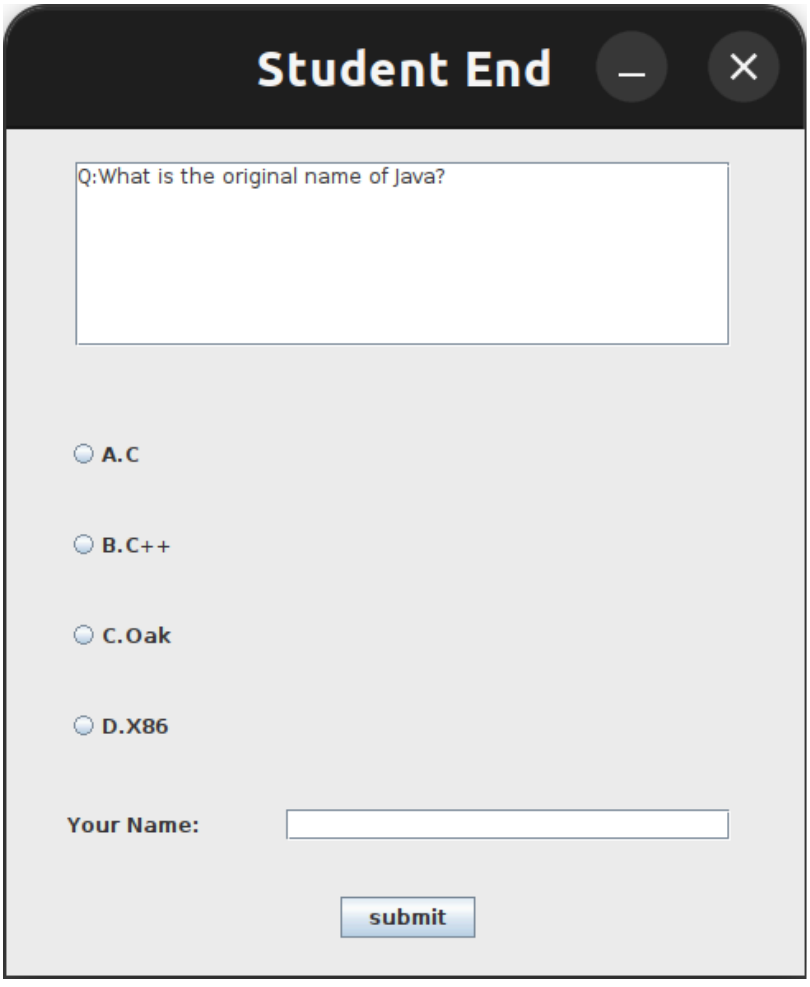
Upon the start, the student is required to fill in the IP field.



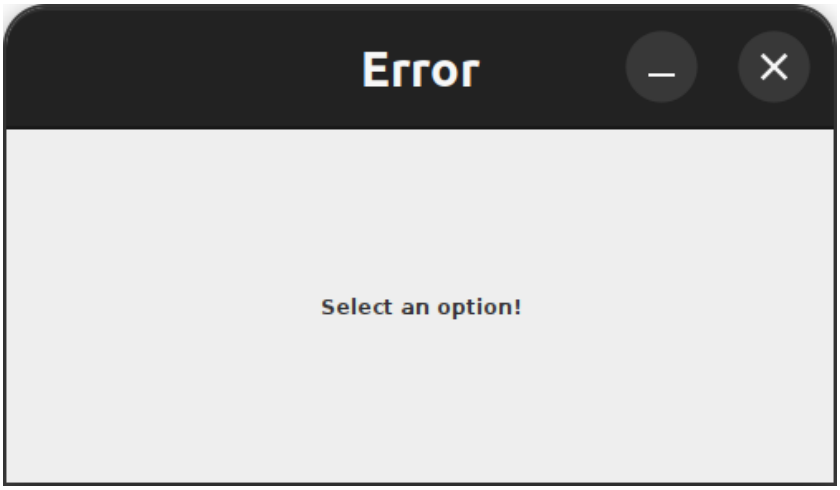
The client will try to connect to the IP for 5 seconds. If the connection spends more than 5 seconds, this situation will be regarded as a timeout (connection failed).

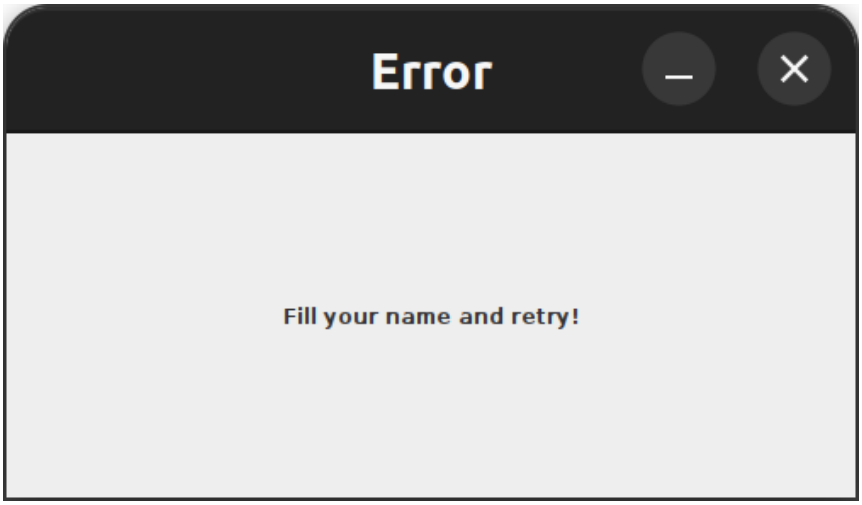


If successful, then the student's end will show the question and its choices:

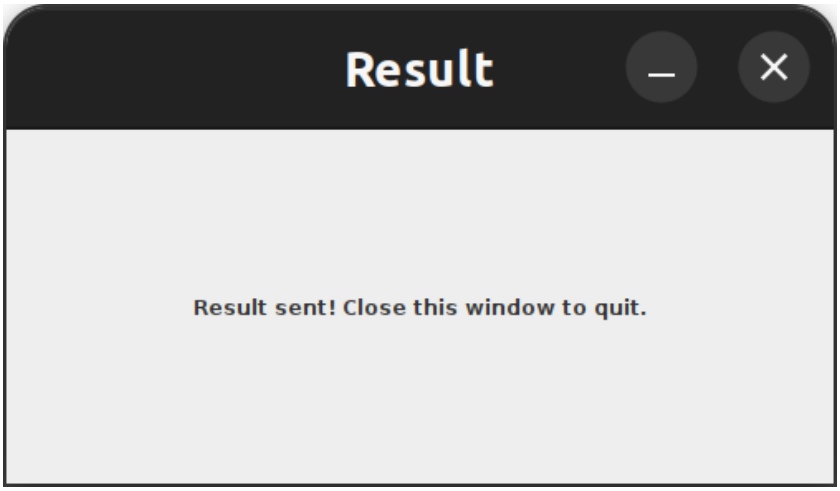


The student must select a choice AND fill in their name. Otherwise:





If everything is filled in, then this window will pop out:



This means that the results have been sent to the server. After closing this window, the student's end will quit.

3. Database

In the database, the table must contain these fields: student, question_id, and answer. Only the records AFTER the database connection will be uploaded to the database. The data stored in the database will look like: