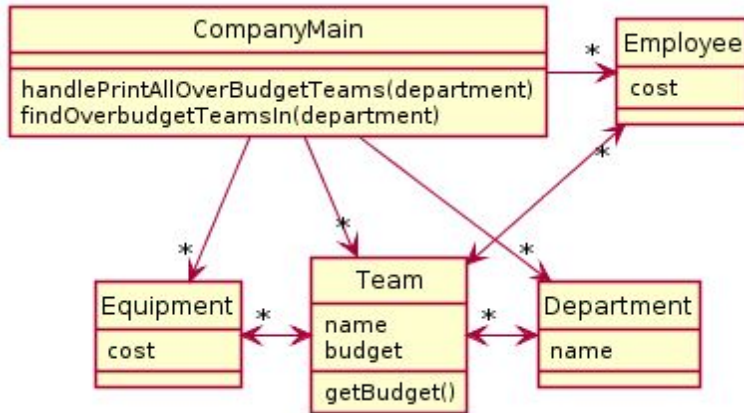
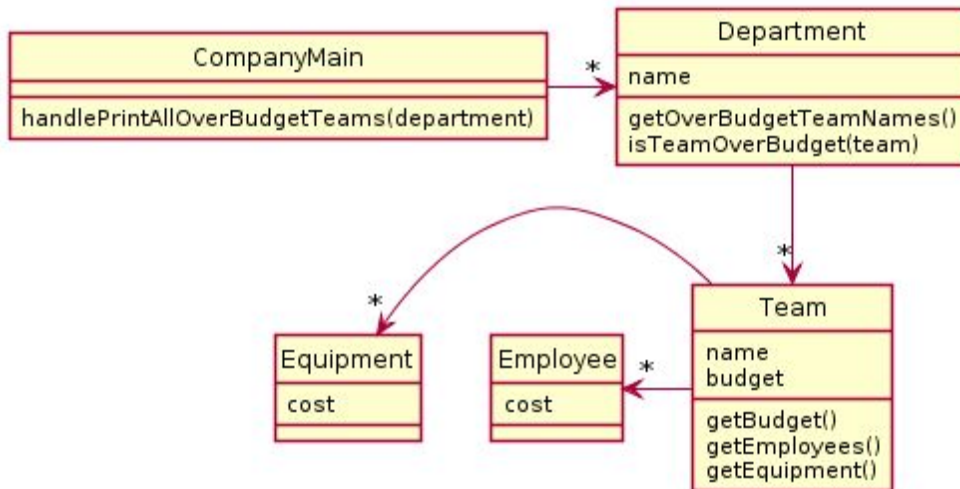


Team Budget: At a particular company, departments are composed of named teams and each team has a yearly budget. Teams have both employees and equipment, each of which have a yearly cost. A team is over budget if the total yearly cost of all employees and equipment is greater than the team's budget. It should be possible to get a list of all teams within a department that are over budget.

Solution A



Solution B



Explain the problems with each one (and give the number of the OO Principles violated)

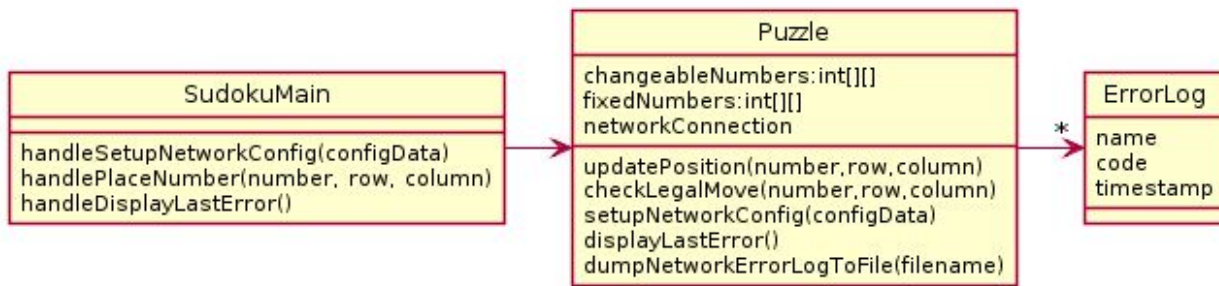
Problems With A

Problems With B

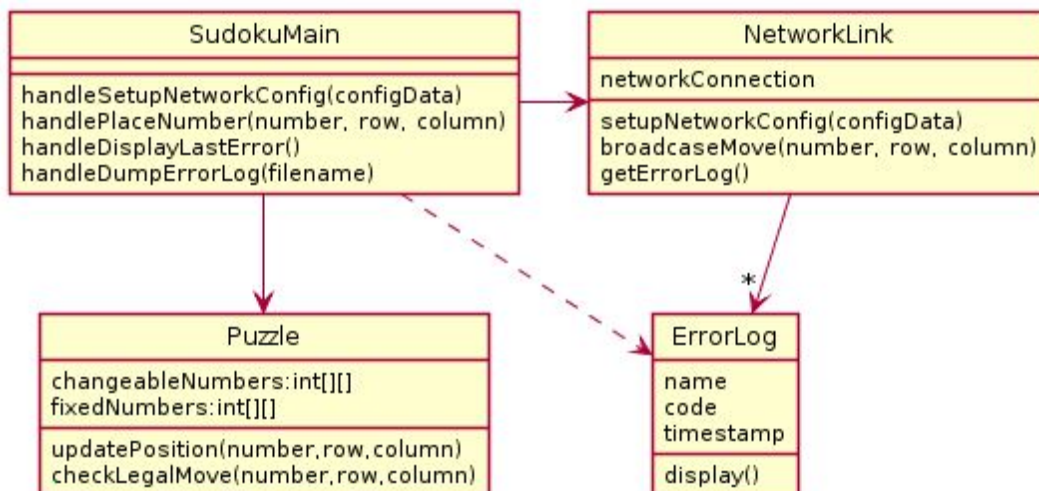
Write your UML solution that fixes all the problems on the **back of page 2**.

Internet Sudoku: A particular program allows people to solve hard sudoku puzzles while spectators watch over the internet. When a user enters a new number, the program must both update the board and ensure it was a legal move. Then the program must broadcast the move to via an internet channel. The internet connection must first be setup with a network configuration. If there are network connectivity problems, they are placed in a error log that is stored in a file and can be displayed with a command. An error log message includes a message, an error code, and a timestamp. The error display command displays the message and timestamp of the most recently recorded error. The error dump command dumps the complete error log to a datafile with the given name.

Solution A



Solution B



****HINT**:** in solution B, the code in `handleDisplayLastError()` looks like this:

```
networkLink.getErrorLog().get(0).display();
```

Explain the problems with each one (and give the number of the OO Principles violated)

Problems With A

Problems With B

Write your UML solution that fixes all the problems on the **back of page 1**.