CMPSC 100

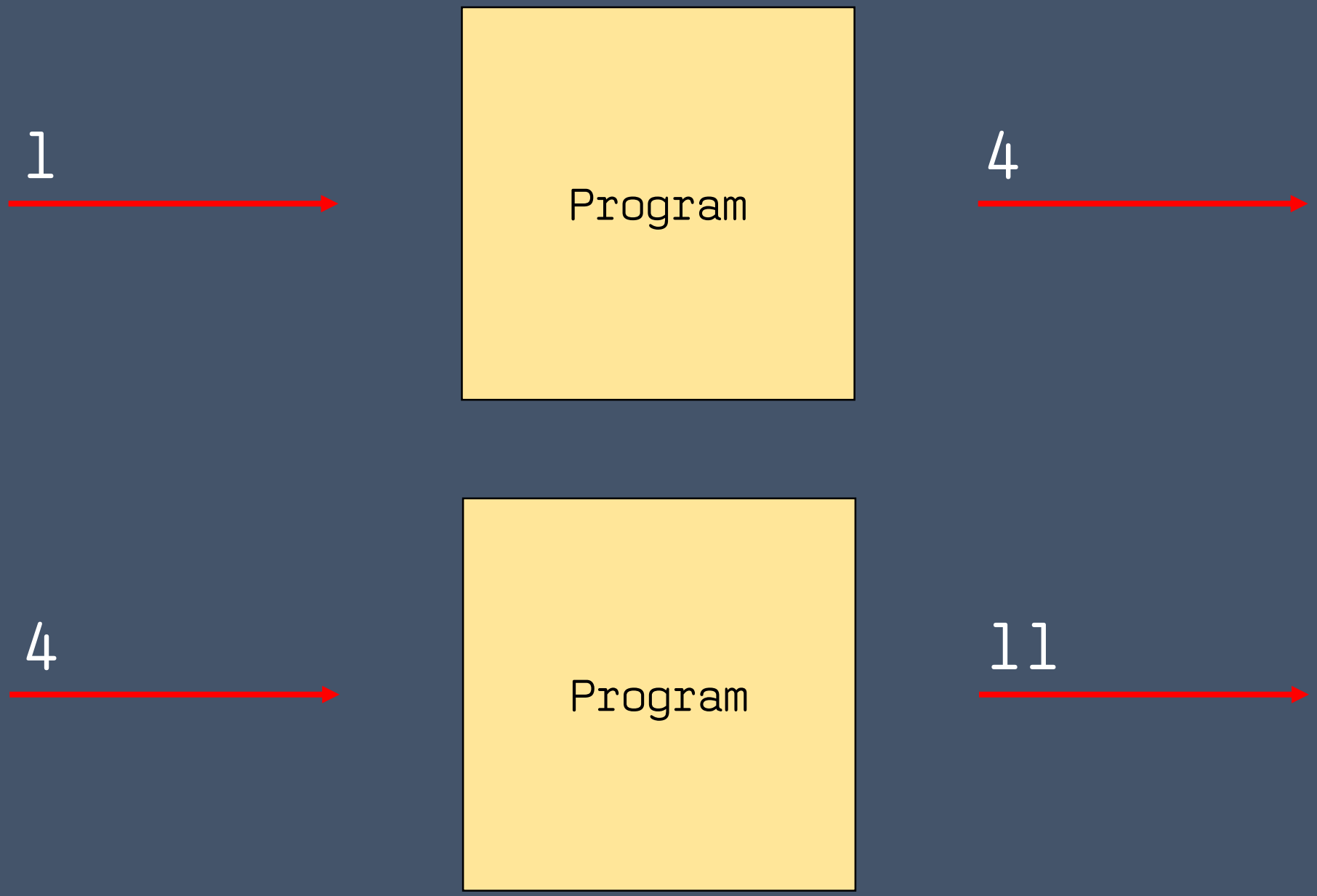
Computational Expression

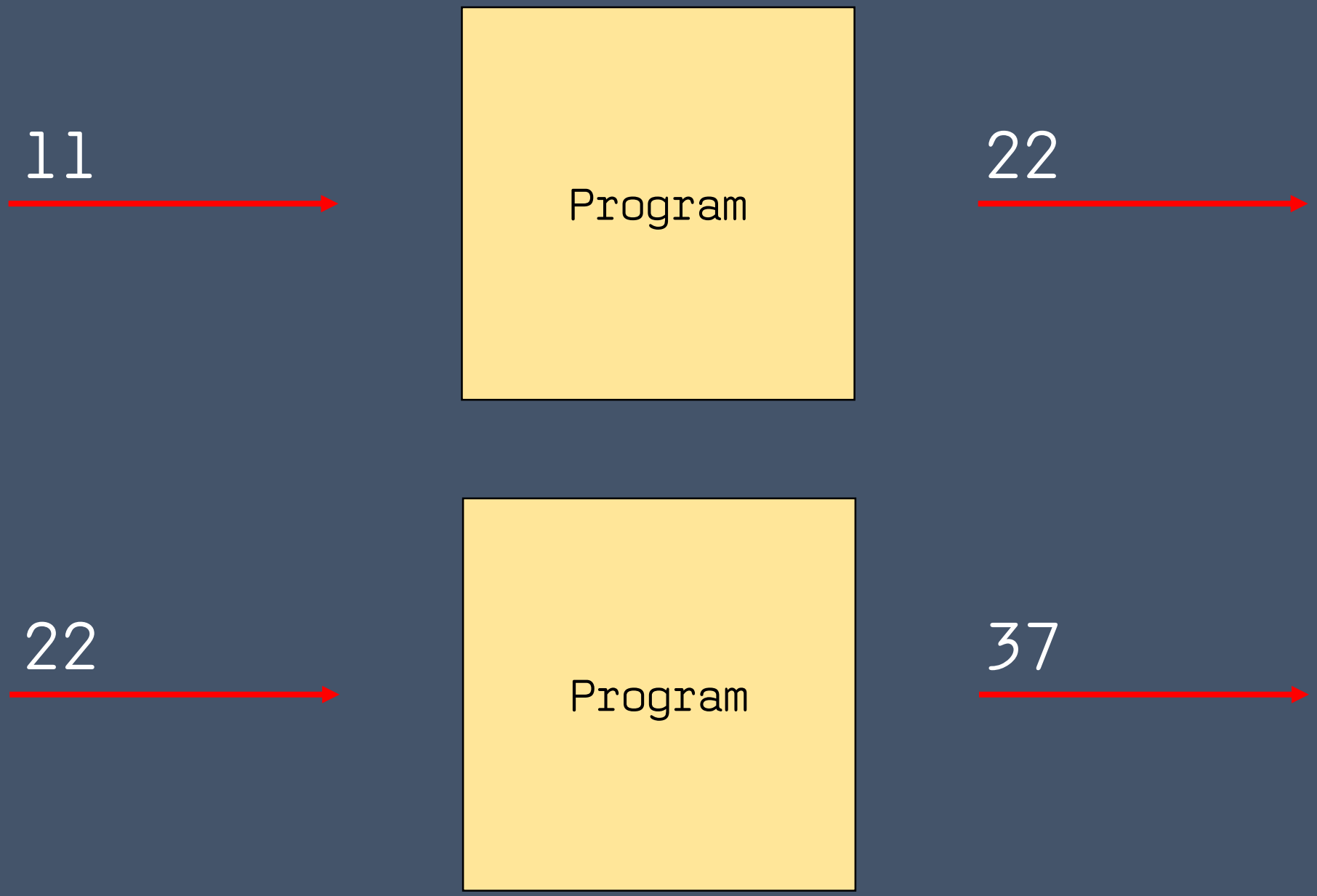
Sit with your project groups today

Testing

- Generally two main categories of application testing:
  - Manual
  - Automated
- For this project, we will use a *manual testing* method known as “black box” testing
  - Generally consists of a table displaying:
    - Known inputs
    - Expected outputs
  - Is “ignorant” of the code
  - Evaluates what *should* happen against what *is* happening


Inputs
Program
Outputs


1
Program
4
4
Program
11


11
Program
22
22
Program
37

Testing

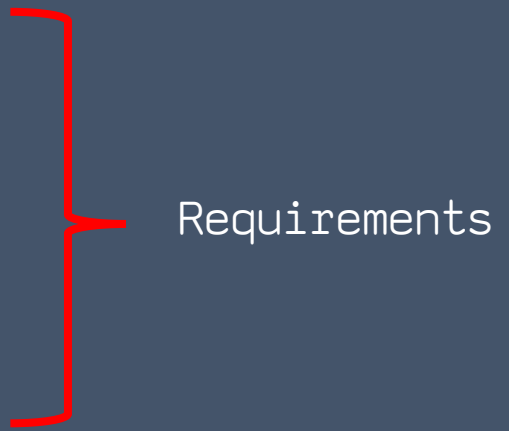
- “Black box” testing method we’ll use: the “Decision Table” technique
  - Steps:
    1. Determine requirements
    2. Create a “positive” scenario
    3. Create an “adverse” scenario
    4. Create decision table for scenarios
    5. Execute tests
    6. Compare outputs against inputs

Scenario

Each group represents a division of QA testers at a U.S. bank. You're testing ATM software which transacts with a new bank account system.

Users should be able to:

- Load an account with an existing balance
- Deposit funds
- Withdraw funds
- At close of a session, print:
  - All transactions
  - Final balance



Scenarios

For both scenarios:

- Bank Account opens with a positive balance of $175

“Positive” scenario

- User deposits $200.23
- User withdraws $50.12
- User ends transaction

“Adverse” scenario

- User deposits -$10.76
- User withdraws $1000.53
- User ends transaction

Decision table

Step	Account balance opens	Account balance opens
Outcome	Transaction OK message	Transaction OK message
Step	User chooses deposit option with letter “D”	User chooses deposit option with letter “D”
Step	User deposits $200.23	User deposits -$10.76
Outcome	Transaction OK message	No message
Step	User chooses withdrawal option with letter “W”	User chooses withdrawal option with letter “W”
Step	User withdraws $50.12	User withdraws $1000.53
Outcome	Transaction OK message	No message
Step	User ends transaction using letter “E”	User ends transaction using letter “E”
Expected outcome	User account balance $325.11	User account balance $175

`git pull download master`

`cd` to the `25-november` folder

Run with `gradle -q --console plain run`

- Run through each scenario and record outcomes
- Create 2 additional scenarios to test based on the outcomes of the first two

To maintain integrity of our testing process, remember that *we know nothing of the source code*.

(So, don't look at the source code.)

Which test cases pass? Which fail?

What can you generalize about the issues from the cases you tried?