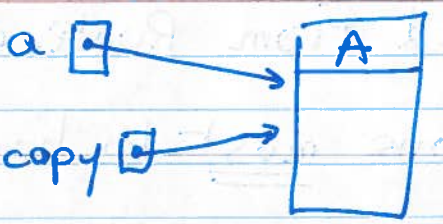
Notes - Friday 5/24 make up class.

1) Quiz solution.

alias:



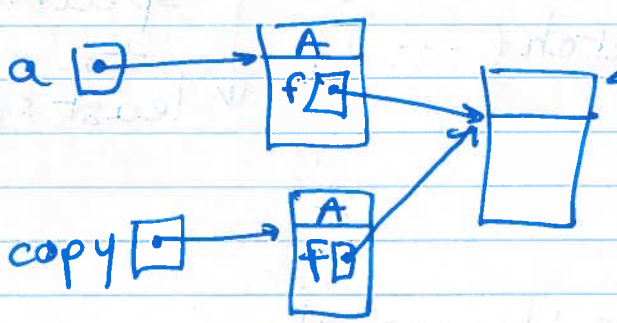
an alias never protects against modifying the original.

e.g.

```
private int i;

a.i = 5;
copy.i = 10;  ⇒ a.i is not 10.
```

shallow copy.



ok if immutable e.g. Color String but not an array

(~~ok~~ also if the type of the field f is a primitive type).

2) Exceptions: (see slides)

checked: not derived from RuntimeException

unchecked: derived from RuntimeException

Checked exceptions must be handled (unchecked exceptions may be handled but don't have to be).

exception handling:

```
try {
    //code that may throw an exception
} catch (....) {
} catch (...) {
}
```

from most specific to least specific

throws keyword.

```
public void m() throws SomeException{
    //code that may throw an
    // exception
}
```

To throw an exception, write

throw new SomeException("message");

- Finally : contains a block of code that is executed whether or not an exception is thrown.

See programs written in class on the class calendar.

3) Streams.

(See slides).

InputStream (A) for binary data.

Reader (A) for character data.

FileInputStream.

FileReader.

Typical program.

open stream.

loop through the stream data.

close stream.

(see program on the class calendar)