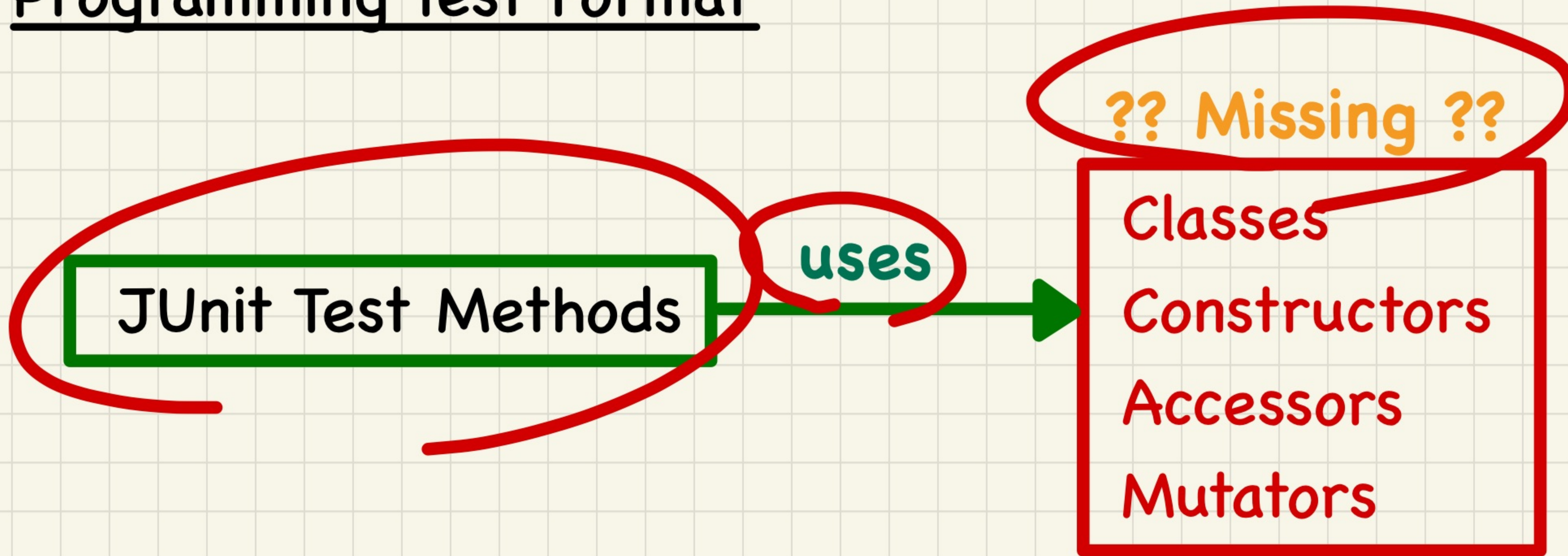


PROGRAMMING TEST I

REVIEW SESSION

FRIDAY OCTOBER 4

Programming Test Format



Your Tasks

- Read the given JUnit tests
- Infer the necessary classes and methods
- Write suitable attributes and method implementations

Requirements

[]

- Use **primitive arrays** and **loops only** to implement collections
- **No** use of any Java library classes (e.g. **ArrayList** **Arrays**)
- **No** import statements at the beginning of your classes

Programming Test Review Exercise: Test 1

```
@Test
public void test01() {
    CourseRecord cr1 = new CourseRecord("EECS2030");
    String cr1Title = cr1.getTitle();
    int cr1Credits = cr1.getNumberOfCredits();
    int cr1RawMarks = cr1.getRawMarks();
    assertEquals("EECS2030", cr1Title);
    assertEquals(0, cr1Credits, 0.01);
    assertEquals(0, cr1RawMarks);
}
```

missing constructor

missing meth. for

C.R.

accessor

RT: String

missing class

Context object

Programming Test Review Exercise: Test 2

```
@Test
public void test02() {
    CourseRecord cr1 = new CourseRecord("EECS2030");
    → cr1.setNumberOfCredits(3);
    cr1.setRawMarks(88);
    String cr1Title = cr1.getTitle();
    int cr1Credits = cr1.getNumberOfCredits();
    int cr1RawMarks = cr1.getRawMarks();
    [ assertEquals("EECS2030", cr1Title);
      assertEquals(3, cr1Credits);
      assertEquals(88, cr1RawMarks);
    ]
}
```

return cr1Credits

Programming Test Review Exercise: Test 3

```
@Test
public void test03() {
    /*
     * Two course records are equal if their title,
     * number of credits, and raw marks are the same.
     */
    CourseRecord cr1 = new CourseRecord("EECS2030", 3);
    cr1.setRawMarks(89);
    CourseRecord cr2 = cr1;

    assertTrue(cr1.equals(cr2));
    assertFalse(cr1.equals(null));
    assertFalse(cr1.equals("EECS2030"));

    CourseRecord cr3 = new CourseRecord("EECS2030", 3);
    cr3.setRawMarks(89);
    assertTrue(cr1.equals(cr3));

    CourseRecord cr4 = new CourseRecord("EECS2030", 3);
    cr4.setRawMarks(87);
    assertFalse(cr1.equals(cr4));
}
```

title

not

missing a new definition of
equals()

missing overridden version of this method!

Programming Test Review Exercise: Test 4

```
@Test
public void test04() {
    /*
     * It is assumed that a student object can store
     * up to and including 30 course records.
     */
    Student heeyeon = new Student("Heeyeon");
    int numberOfCourses = heeyeon.getNumberOfCourses();
    assertEquals(0, numberOfCourses);
    assertTrue(heeyeon.getCourses().length == 0);
}
```

heeyeon.getCourses().length == 0
return null

Context object
missing methods don't find
length

Student[]
Course Record[]
length() X String[]

Programming Test Review Exercise: Test 5

```
@Test
public void test05() {
    Student jiyoon = new Student("Jiyoon");
    CourseRecord cr1 = new CourseRecord("EECS1022", 3);
    cr1.setRawMarks(67);
    CourseRecord cr2 = new CourseRecord("EECS2030", 3);
    cr2.setRawMarks(78);
    jiyoon.addCourse(cr1);
    jiyoon.addCourse(cr2);
    int numberOfCourses = jiyoon.getNumberOfCourses();
    assertEquals(2, numberOfCourses);
    assertTrue(jiyoon.getCourses().length == 2);
    assertSame(jiyoon.getCourses()[0], cr1);
    assertTrue(jiyoon.getCourses()[0].getTitle().equals("EECS1022"));
    assertTrue(jiyoon.getCourses()[1] == cr2);
    assertTrue(jiyoon.getCourses()[1].getTitle().equals("EECS2030"));
}
```

missing mutator from Student taking CourseRecord

Student[]
CourseRecord

Student
CourseRecord

$a[0] = \text{jiyoon}.courses[0]$

$a[1] = \text{jiyoon}.courses[1]$

@Test

public void test05() {

→ Student jiyoon = new Student("Jiyoon");

→ CourseRecord cr1 = new CourseRecord("EECS1022", 3);
cr1.setRawMarks(67);

→ CourseRecord cr2 = new CourseRecord("EECS2030", 3);
cr2.setRawMarks(78);

→ jiyoon.addCourse(cr1);

→ jiyoon.addCourse(cr2);

int numberOfCourses = jiyoon.getNumberOfCourses();

assertEquals(2, numberOfCourses);

→ assertTrue(jiyoon.getCourses().length == 2);

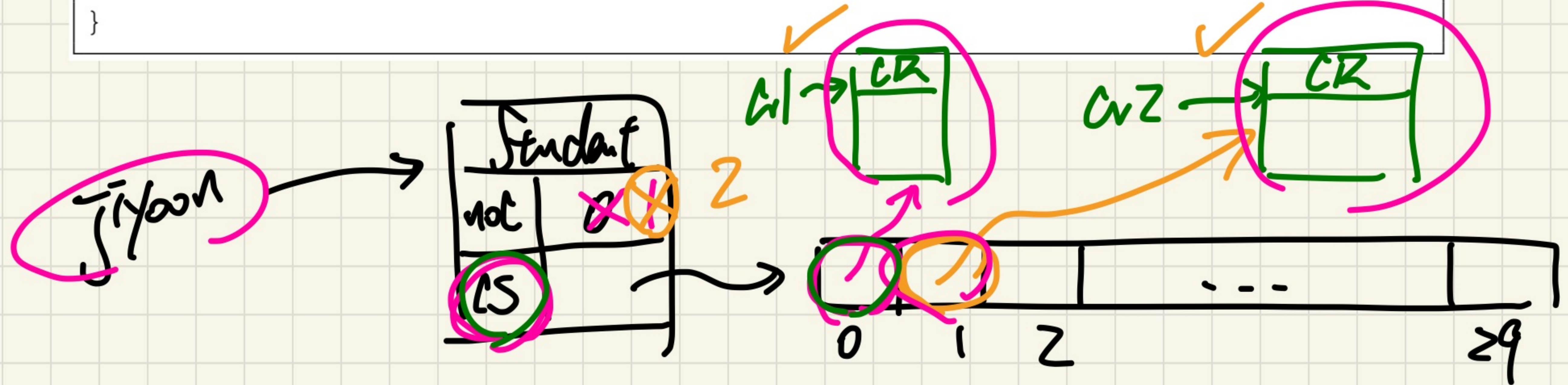
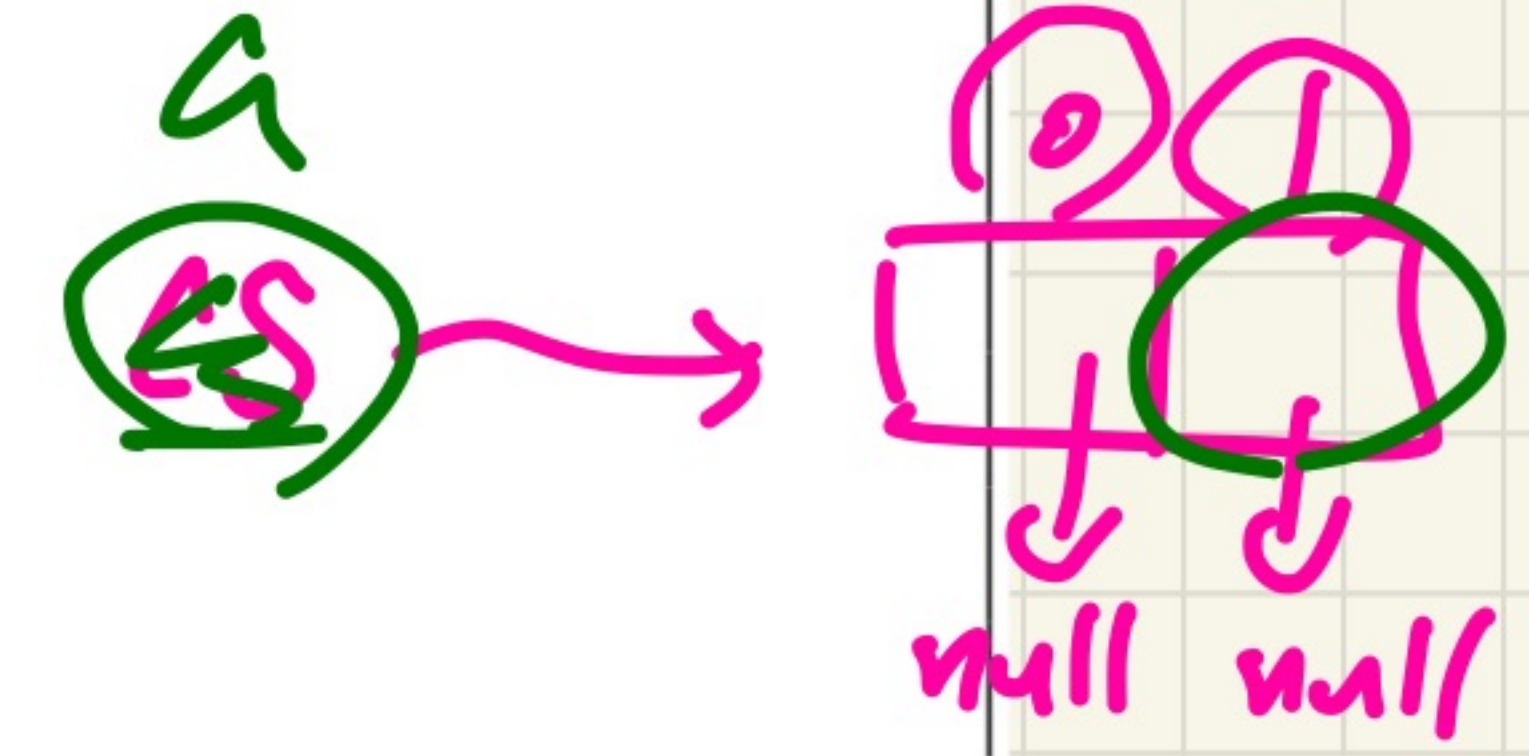
→ assertSame(jiyoon.getCourses()[0], cr1);

assertTrue(jiyoon.getCourses()[0].getTitle().equals("EECS1022"));

→ assertTrue(jiyoon.getCourses()[1] == cr2);

assertTrue(jiyoon.getCourses()[1].getTitle().equals("EECS2030"));

}




```

for(int i = 0; i < this.courses.length; i++) {
    a[i] = this.courses[i];
}

```

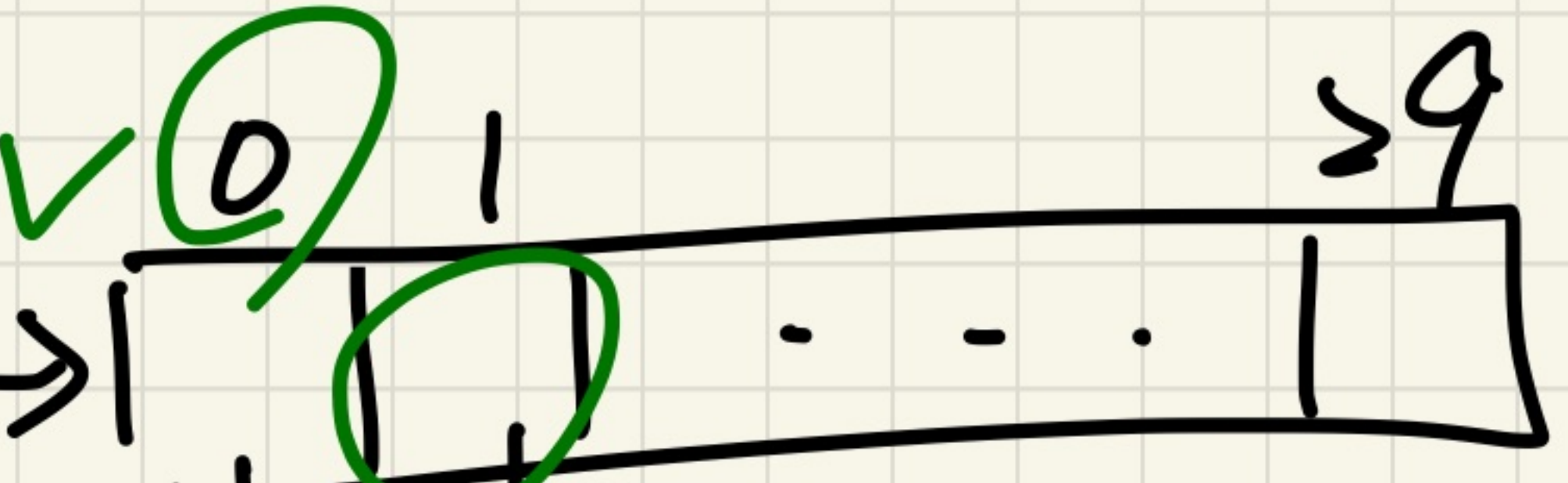
noc

tryoon. getLetterGrade
 "EHS201"
 ("EHS2035")

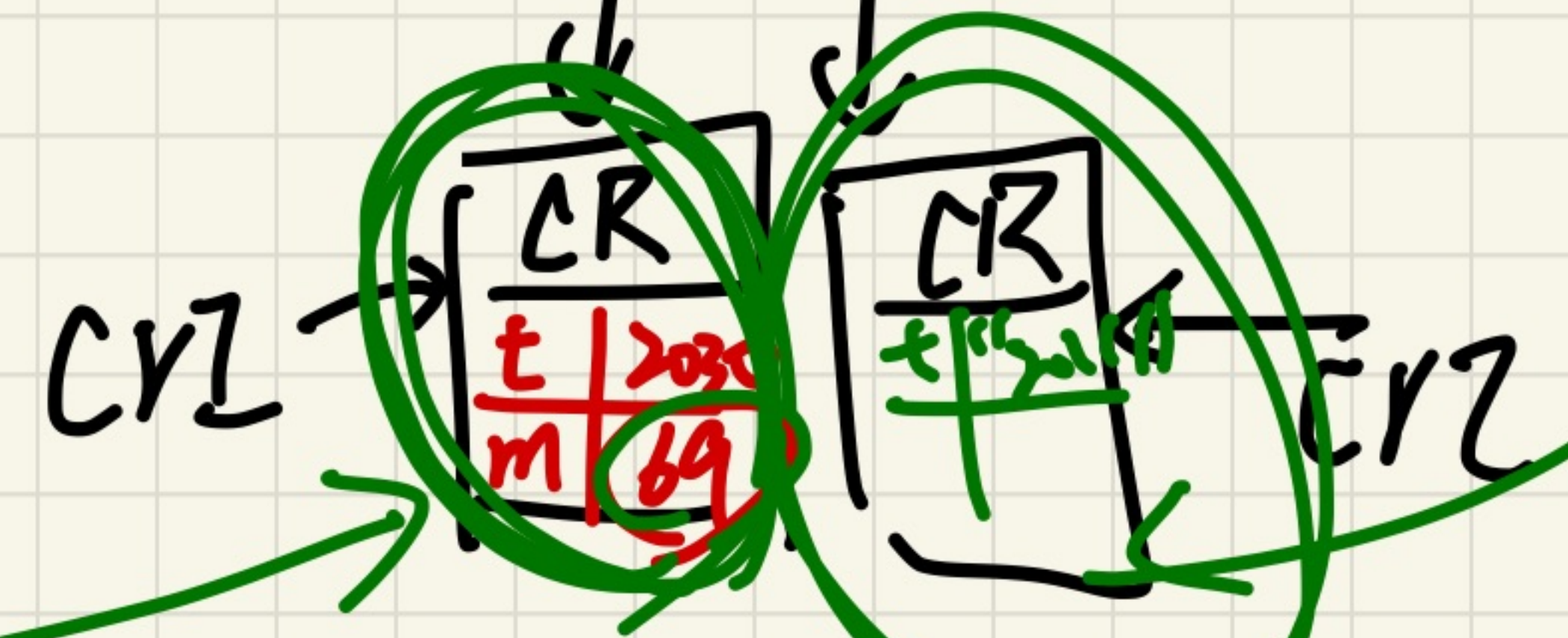
a[2] → AIOBT

tryoon

| Student | |
|---------|---|
| noc | 2 |
| name | |



courses[0]



" "