CSE412
Software Engineering

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Lab 04
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Unit testing using JUnit4

Code to be Tested

```java
public int calculateSalary(int hour, int day){
    // weekday = 1, Holiday/Sunday = 0
    if (hour<48 && day == 1) return hour*150;
    else if ( day == 0) return hour*200;
    else return hour*180;
}
```
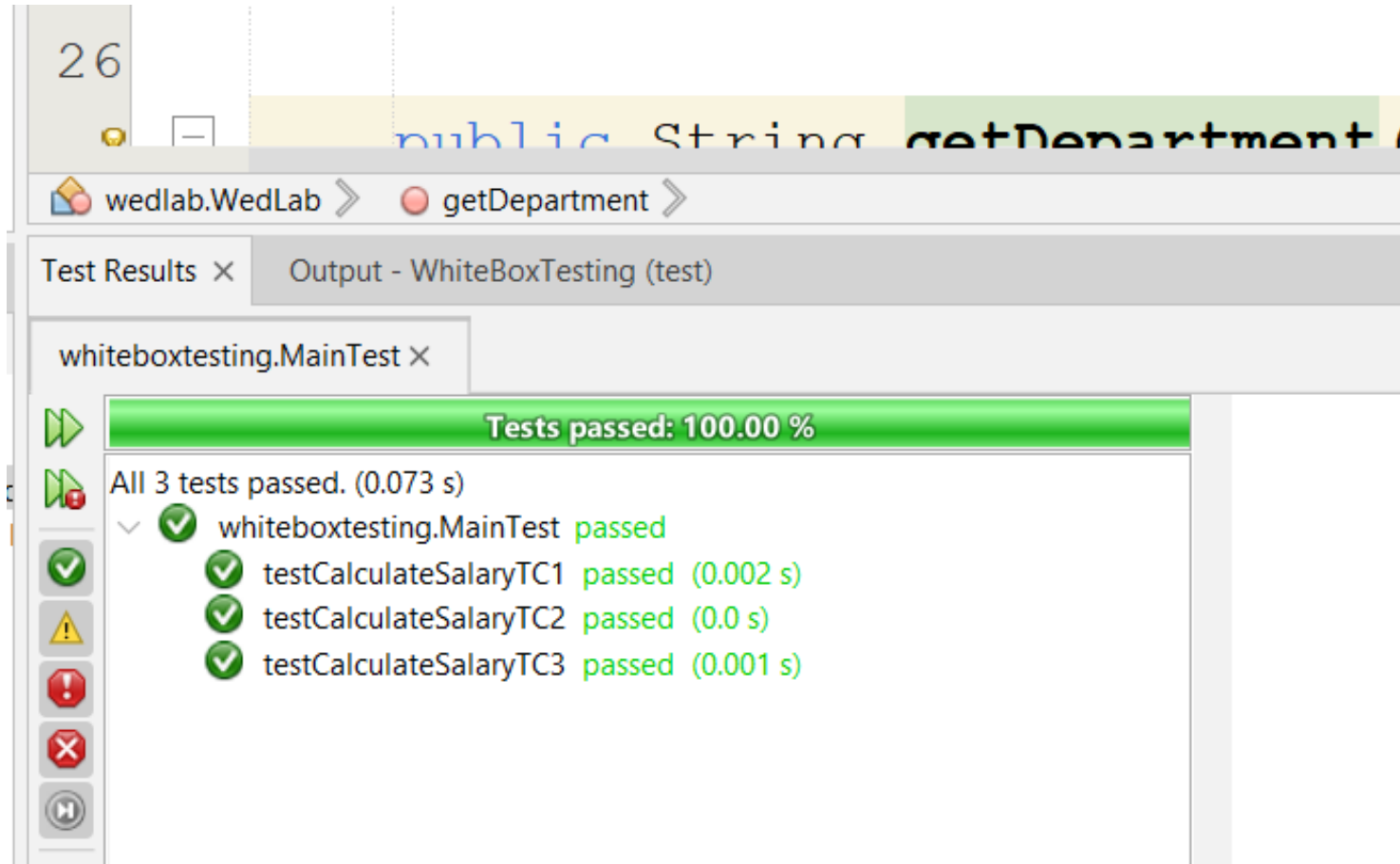
Test Case

Test Case	Hour	Day	Expected Output
1	45	Tuesday	45*150=6750
2	50	Tuesday	50*180=9000
3	50	Sunday	50*200=10000

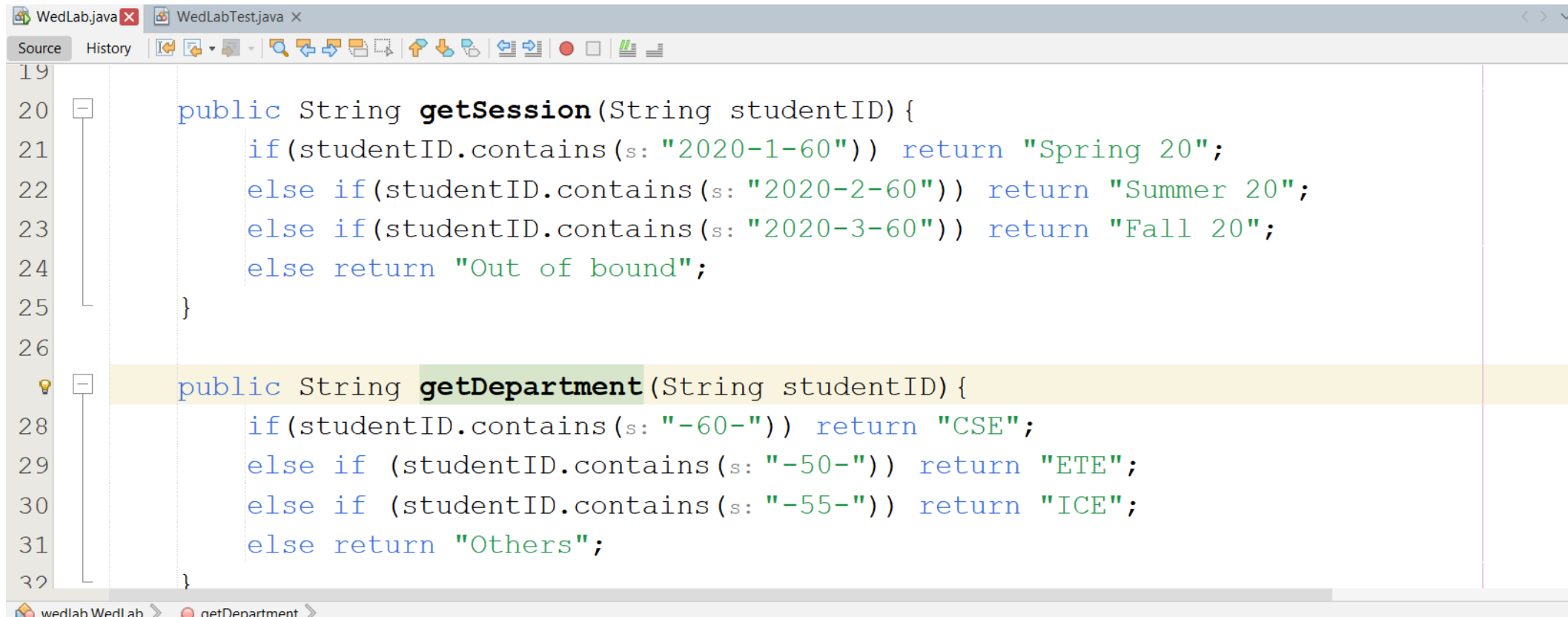# Test Methods

```java
19      @Test
        public void testCalculateSalaryTC1() {
21          int hour = 45;
22          int day = 1;
23          int expOutput = hour*150;
24          Main wb = new Main();
25          int actOutput = wb.calculateSalary(hour, day);
26          assertEquals(expected: expOutput, actual: actOutput);
27      }
28
29      @Test
        public void testCalculateSalaryTC2() {
31          int hour = 50;
32          int day = 1;
33          int expOutput = hour*180;
34          Main wb = new Main();
35          int actOutput = wb.calculateSalary(hour, day);
36          assertEquals(expected: expOutput, actual: actOutput);
37      }
38
39      @Test
        public void testCalculateSalaryTC3() {
41          int hour = 50;
42          int day = 0; //holiday
43          int expOutput = hour*200;
44          Main wb = new Main();
45          int actOutput = wb.calculateSalary(hour, day);
46          assertEquals(expected: expOutput, actual: actOutput);
47      }
```

Result

Lab Assignment

Code to be Tested


```java
    public String getSession(String studentID){
        if(studentID.contains(s: "2020-1-60")) return "Spring 20";
        else if(studentID.contains(s: "2020-2-60")) return "Summer 20";
        else if(studentID.contains(s: "2020-3-60")) return "Fall 20";
        else return "Out of bound";
    }

    public String getDepartment(String studentID){
        if(studentID.contains(s: "-60-")) return "CSE";
        else if (studentID.contains(s: "-50-")) return "ETE";
        else if (studentID.contains(s: "-55-")) return "ICE";
        else return "Others";
    }
```

Lab work 01

Test Case	StudentID	Expected Result
M1_1	2020-1-60-123	Spring 20
M1_2	2020-2-60-123	Summer 20
M1_3	2020-3-60-123	Fall 20
M1_4	2021-1-60-123	Out of Bound
M2_5	2020-1-60-123	CSE
M2_6	2020-1-50-123	ETE
M2_7	2020-1-55-123	ICE
M2_8	2020-1-40-123	Others