



COMP 110 CONDITIONALS

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PREREQUISITE

- Types Math

-



CONDITIONALS

`printPassFailStatus(95)`

Passed

`printPassFailStatus(25)`

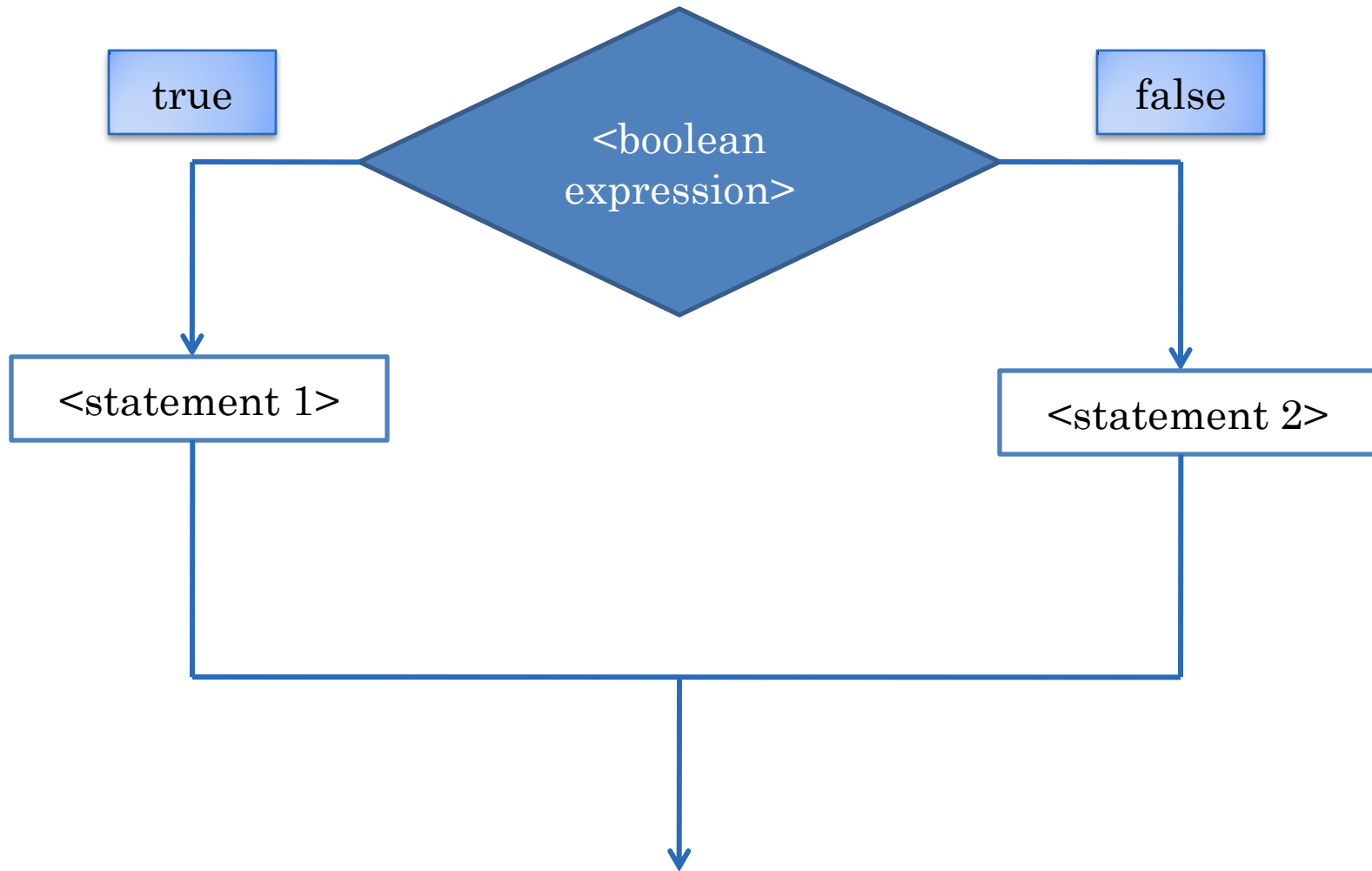
Failed

```
public static void printPassFailStatus(int score) {  
    if (score < PASS_CUTOFF)  
        System.out.println("FAILED");  
    else  
        System.out.println("PASSED");  
}
```

IF-ELSE STATEMENT

```
if ( <boolean expression> )  
    <statement 1>;  
else  
    <statement 2>;
```

IF-ELSE STATEMENT



COMPOUND STATEMENT

```
public void fancyPrintGrade(int score)
{
    if (score < PASS_CUTOFF)
    {
        System.out.println("*****");
        System.out.println("FAILED");
        System.out.println("*****");
    }
    else
    {
        System.out.println("*****");
        System.out.println("PASSED");
        System.out.println("Congratulations!");
        System.out.println("*****");
    }
}
```

COMPOUND STATEMENT – {} CONVENTION

```
public void fancyPrintGrade(int score)
{
    if (score < PASS_CUTOFF) {
        System.out.println("*****");
        System.out.println("FAILED");
        System.out.println("*****");
    } else {
        System.out.println("*****");
        System.out.println("PASSED");
        System.out.println("Congratulations!");
        System.out.println("*****");
    }
}
```

AVOIDING CODE DUPLICATION IN IF-ELSE (EDIT)

```
public void fancyPrintGrade(int score)
{
    if (score < PASS_CUTOFF)
    {
        System.out.println("*****");
        System.out.println("FAILED");
        System.out.println("*****");
    }
    else
    {
        System.out.println("*****");
        System.out.println("PASSED");
        System.out.println("Congratulations!");
        System.out.println("*****");
    }
}
```


AVOIDING CODE DUPLICATION IN IF-ELSE

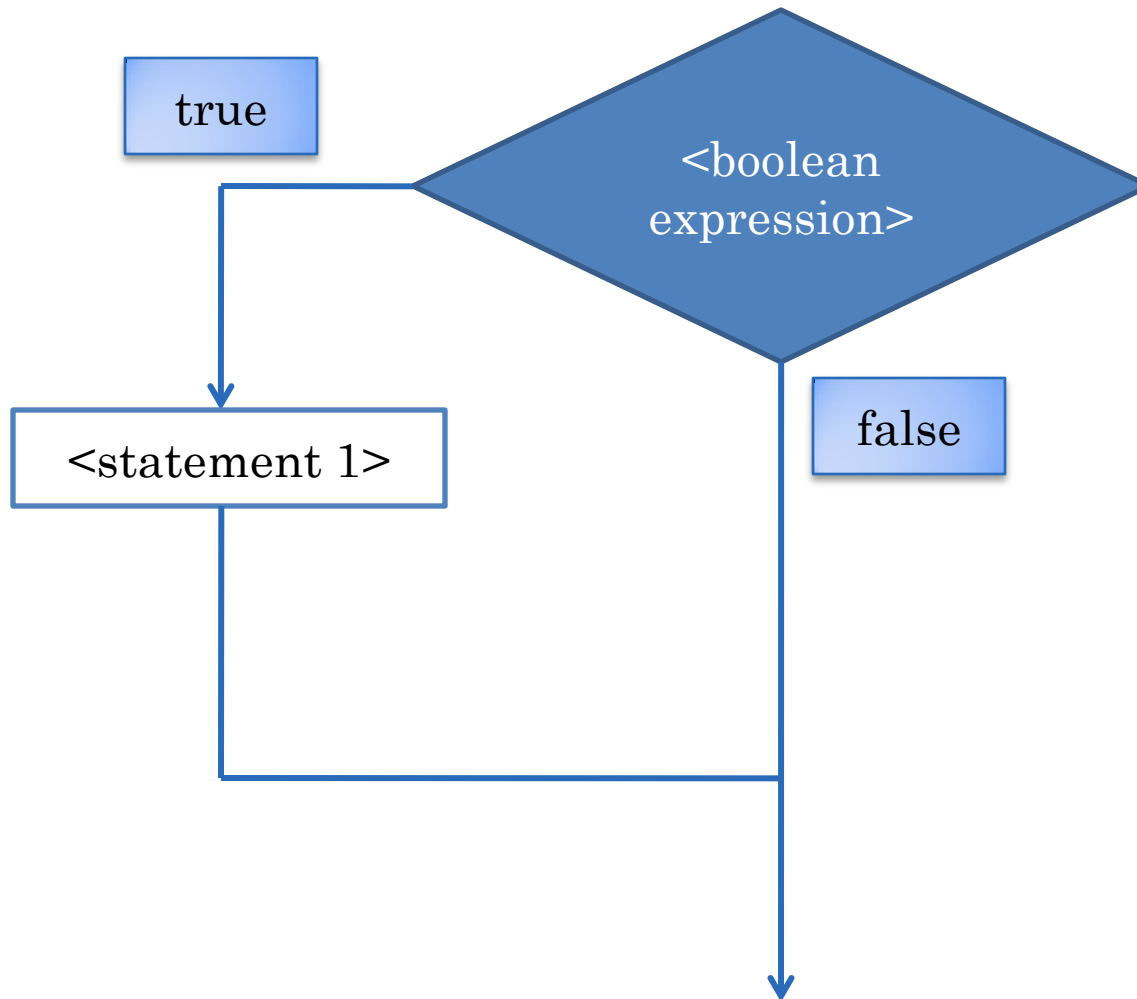
```
public void fancyPrintGrade(int score)  {  
    System.out.println("*****");  
    if (score < PASS_CUTOFF)  
        System.out.println("FAILED");  
    else {  
        System.out.println("PASSED");  
        System.out.println("Congratulations!");  
    }  
    System.out.println("*****");  
}
```

IF STATEMENT

```
if (score == MAX_SCORE)
    System.out.println ("Perfect Score! Congratulations!");
```

```
if (<bool expr>
    <statement>;
```

IF STATEMENT

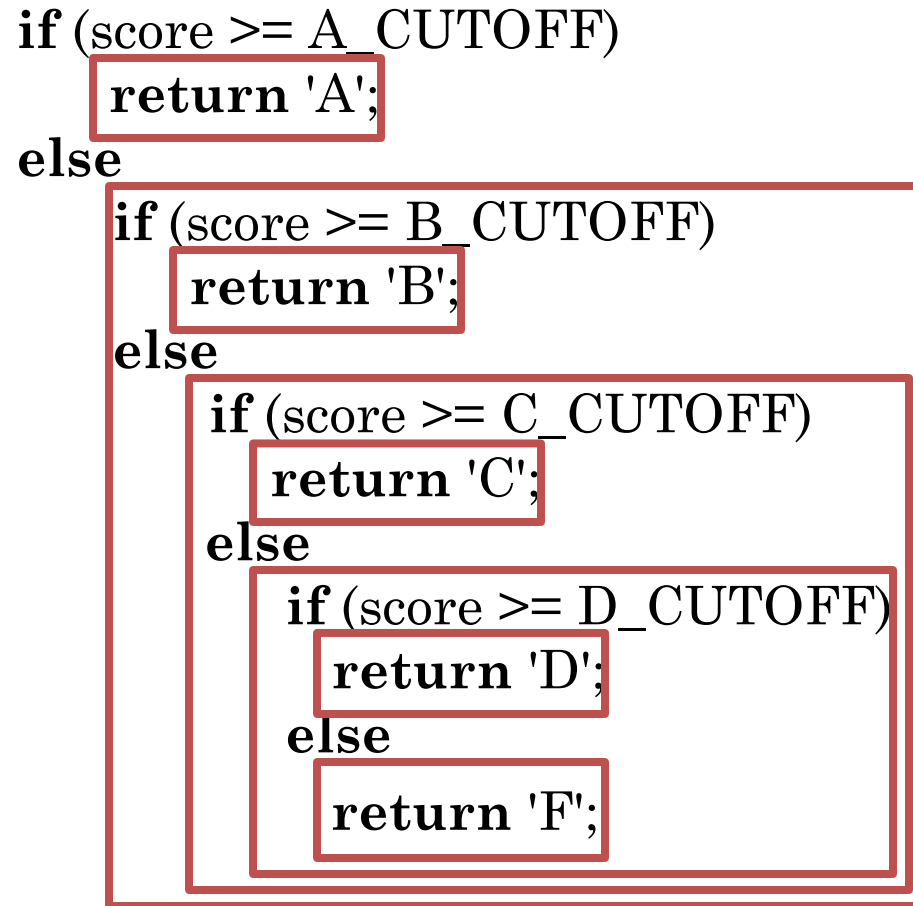


ELSE-IF

```
public static char toLetterGrade (int score)
{
    if (score >= A_CUTOFF)
        return 'A';
    else if (score >= B_CUTOFF)
        return 'B';
    else if (score >= C_CUTOFF)
        return 'C';
    else if (score >= D_CUTOFF)
        return 'D';
    else
        return 'F';
}
```

NESTED IF-ELSE

```
if (score >= A_CUTOFF)
    return 'A';
else
    if (score >= B_CUTOFF)
        return 'B';
    else
        if (score >= C_CUTOFF)
            return 'C';
        else
            if (score >= D_CUTOFF)
                return 'D';
            else
                return 'F';
```

The diagram illustrates nested if-else statements. The code is presented with four levels of indentation. Each 'return' statement is enclosed in a red rectangular box. Additionally, the entire code block is enclosed in a large red rectangular box, and the inner blocks are also enclosed in red boxes, visually representing the nesting of the conditional logic.

NESTED IF-ELSE

