



SWITCH STATEMENTS

Multiway Branch



BASIC SWITCH SYNTAX

The test expression must be integer-valued, is often just a variable.

The target for each case must be an integer constant.

```
switch (expression)
{
    case c1:
        statement0;
        statement1;
        break;
    case c2:
        statement3;
        statement4;
        break;
    case c3:
        statement5;
        statement6;
        break;
    case c4:
        statement7;
        statement8;
        break;
    default:
        statement9;
        statement10;
        break;
}
```

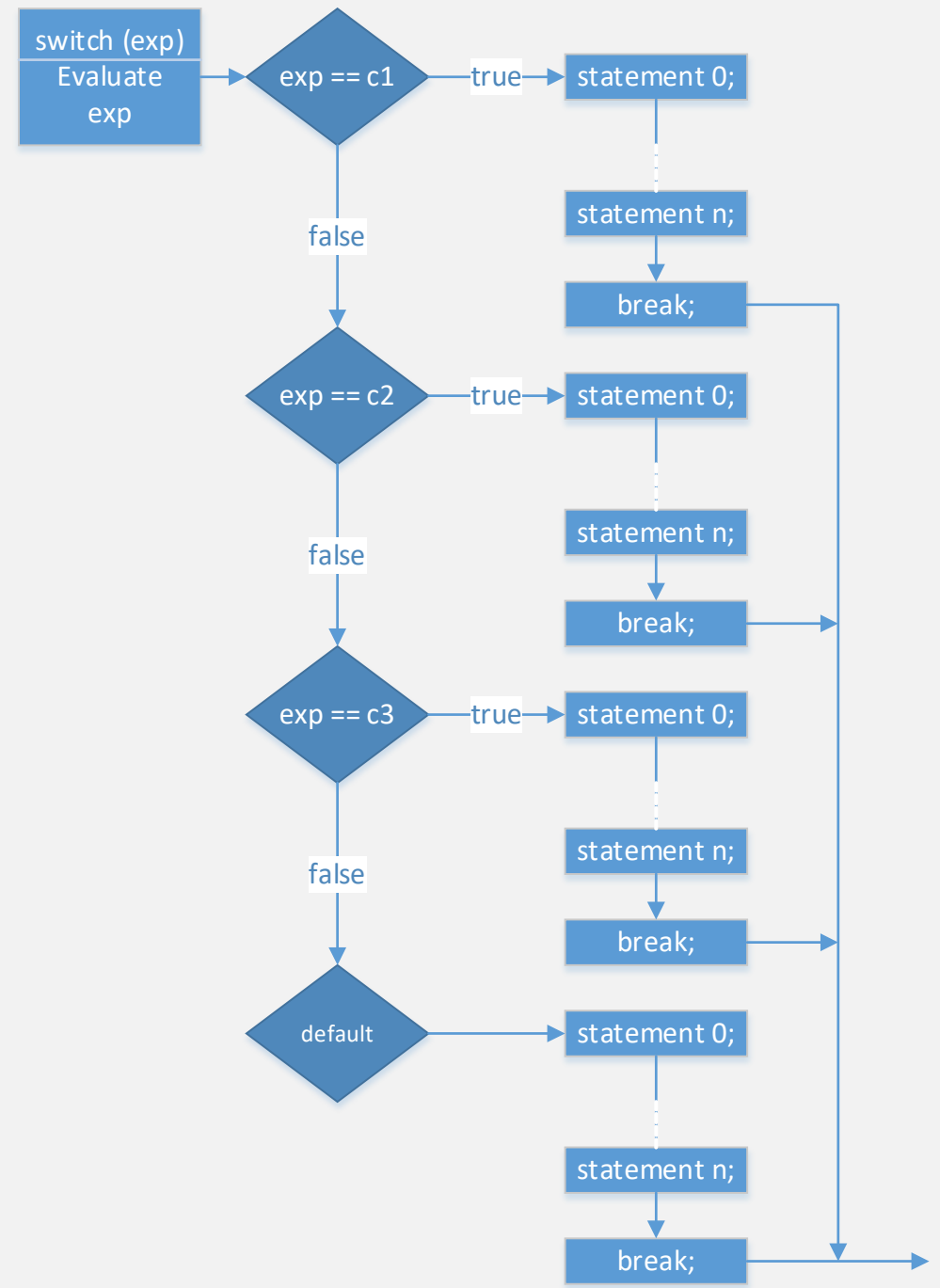


BASIC SWITCH BEHAVIOR

The expression is compared to the cases from top to bottom.

Cases match the expression on strict equality.

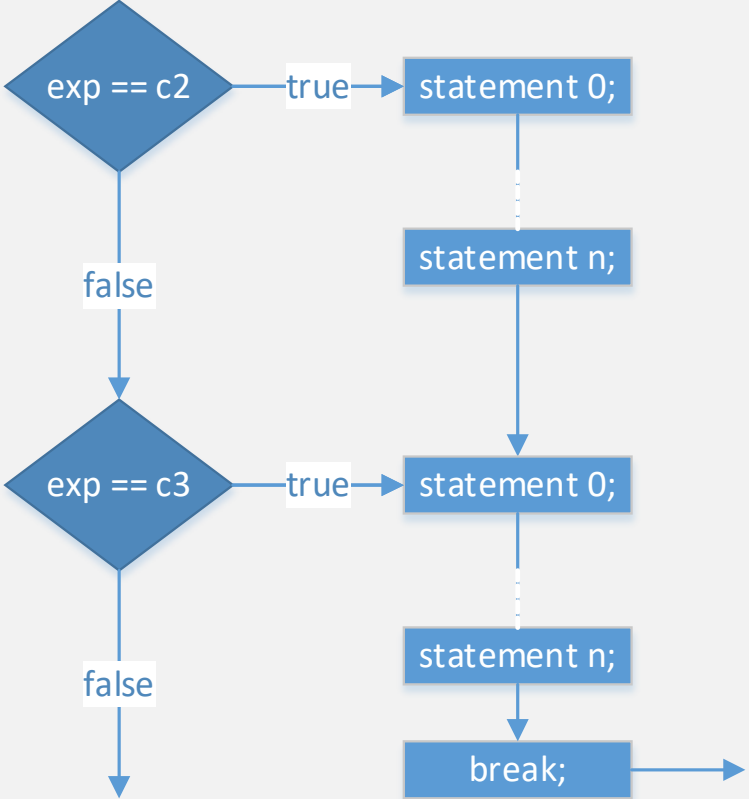
Execution continues until a break.





FALL THROUGH

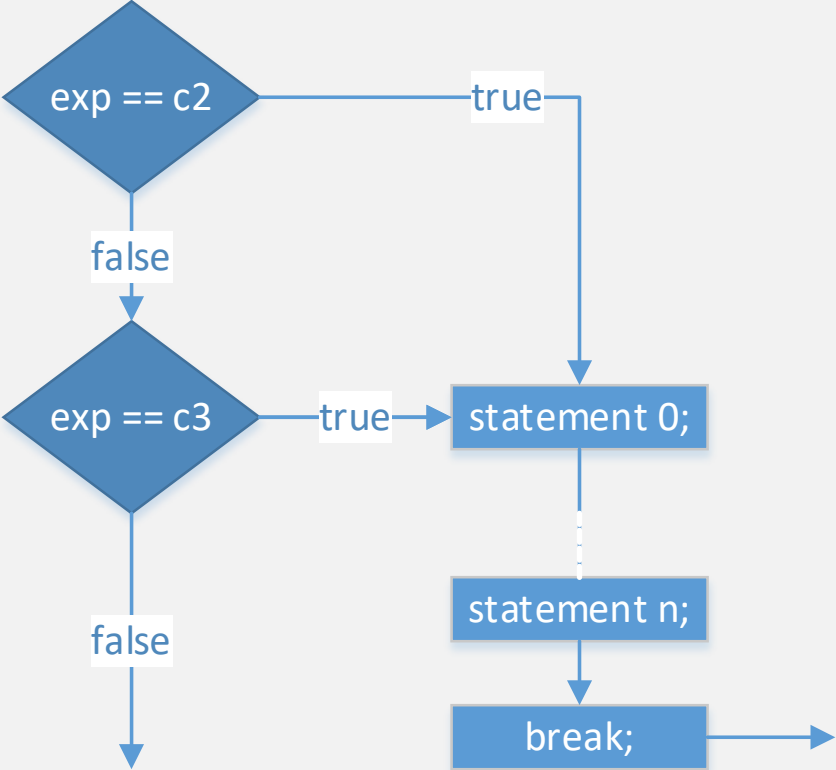
```
. . .  
case c2:  
    statement0;  
    statement1;  
    statement2;  
    // fall through  
case c3:  
    statement3;  
    statement4;  
    break;  
. . .
```





“OR” CASES

```
·  
·  
·  
case c2:  
case c3:  
  statement0;  
  statement1;  
break;  
·  
·  
·
```





CASES AND SCOPE

```
switch (expr)
{
    case c1:
        int    counter;
        . . .
        break;
    case c2:
        int    counter;
        . . .
        break;
}
```

```
switch (expr)
{
    case c1:
        {
            int    counter;
            . . .
            break;
        }
    case c2:
        {
            int    counter;
            . . .
            break;
        }
}
```