

Java Conditional Statements

CSCI 111

if statement

```
//code (execute whether true or false)
```

```
if(condition)
```

```
{
```

```
    //code to execute if true
```

```
}
```

```
//code (execute whether true or false)
```

if statement

```
int age = 14;  
System.out.println(age);  
  
if(age < 16)  
{  
    System.out.println("Can't drive");  
}  
  
System.out.println("Have a good day");
```

if statement

```
int age = 14;  
System.out.println(age);
```

```
if(age < 16)  
{  
    System.out.println("Can't drive");  
}
```

```
System.out.println("Have a good day");
```

14

if statement

```
int age = 14;  
System.out.println(age);
```

```
if(age < 16)  
{  
    System.out.println("Can't drive");  
}
```

```
System.out.println("Have a good day");
```

14

Can't drive

if statement

```
int age = 14;  
System.out.println(age);
```

```
if(age < 16)  
{  
    System.out.println("Can't drive");  
}
```

```
System.out.println("Have a good day");
```

14

Can't drive

Have a good day

if statement

```
int age = 18;  
System.out.println(age);  
  
if(age < 16)  
{  
    System.out.println("Can't drive");  
}  
  
System.out.println("Have a good day");
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if statement

```
int age = 18;  
System.out.println(age);
```

```
if(age < 16)  
{  
    System.out.println("Can't drive");  
}
```

```
System.out.println("Have a good day");
```

18

Have a good day

if statement

```
int age = 18;  
System.out.println(age);
```

```
if(age < 16)  
{  
    System.out.println("Can't drive");  
}
```

```
System.out.println("Have a good day");
```

18

Have a good day

if statement

```
int age = 18;  
System.out.println(age);
```

```
if(age < 16)  
{  
    System.out.println("Can't drive");  
}
```

```
System.out.println("Have a good day");
```

18

Have a good day

if-else statement

```
//code (execute whether true or false)
```

```
if(condition)
```

```
{
```

```
    //code to execute if true
```

```
}
```

```
else
```

```
{
```

```
    //code to execute if false
```

```
}
```

```
//code (execute whether true or false)
```

if-else statement

```
int age = 14;
System.out.println(age);

if(age < 16)
{
    System.out.println("Can't drive");
}
else
{
    System.out.println("Can drive");
}

System.out.println("Have a good day");
```

if-else statement

```
int age = 14;  
System.out.println(age);
```

```
if(age < 16)  
{  
    System.out.println("Can't drive");  
}  
else  
{  
    System.out.println("Can drive");  
}
```

```
System.out.println("Have a good day");
```

14

if-else statement

```
int age = 14;  
System.out.println(age);
```

```
if(age < 16)  
{  
    System.out.println("Can't drive");  
}  
else  
{  
    System.out.println("Can drive");  
}
```

```
System.out.println("Have a good day");
```

14

Can't drive

if-else statement

```
int age = 14;  
System.out.println(age);
```

```
if(age < 16)  
{  
    System.out.println("Can't drive");  
}  
else  
{  
    System.out.println("Can drive");  
}
```

```
System.out.println("Have a good day");
```

14

Can't drive

Have a good day

if-else statement

```
int age = 18;
System.out.println(age);

if(age < 16)
{
    System.out.println("Can't drive");
}
else
{
    System.out.println("Can drive");
}

System.out.println("Have a good day");
```


if-else statement

```
int age = 18;  
System.out.println(age);
```

```
if(age < 16)  
{  
    System.out.println("Can't drive");  
}  
else  
{  
    System.out.println("Can drive");  
}
```

```
System.out.println("Have a good day");
```

18

Can drive

Have a good day

if-elseif statement

```
//code (execute whether true or false)

if(cond1)
{
    //code to execute if true
}
else if (cond2)
{
    //code to execute if cond1 is false and cond2 is true
}
else if (cond3)
{
    //code to execute if cond1, cond2 are false and cond3 is true
}
else
{
    //code to execute if cond1, cond2, and cond3 are false
}

//code (execute whether true or false)
```

if-elseif statement

```
double grade = 77.32;
System.out.println(grade);

if(grade >= 90)
{
    System.out.println("A");
}
else if (grade >= 80)
{
    System.out.println("B");
}
else if (grade >= 70)
{
    System.out.println("C");
}
else if (grade >= 60)
{
    System.out.println("D");
}
else
{
    System.out.println("F");
}

System.out.println("Study hard!");
```

if-elseif statement

```
double grade = 77.32;  
System.out.println(grade);
```

```
if(grade >= 90)  
{  
    System.out.println("A");  
}  
else if (grade >= 80)  
{  
    System.out.println("B");  
}  
else if (grade >= 70)  
{  
    System.out.println("C");  
}  
else if (grade >= 60)  
{  
    System.out.println("D");  
}  
else  
{  
    System.out.println("F");  
}
```

```
System.out.println("Study hard!");
```

77.32

if-elseif statement

```
double grade = 77.32;
System.out.println(grade);

if(grade >= 90)
{
    System.out.println("A");
}
else if (grade >= 80)
{
    System.out.println("B");
}
else if (grade >= 70)
{
    System.out.println("C");
}
else if (grade >= 60)
{
    System.out.println("D");
}
else
{
    System.out.println("F");
}

System.out.println("Study hard!");
```

77.32

if-elseif statement

```
double grade = 77.32;
System.out.println(grade);

if(grade >= 90)
{
    System.out.println("A");
}
else if (grade >= 80)
{
    System.out.println("B");
}
else if (grade >= 70)
{
    System.out.println("C");
}
else if (grade >= 60)
{
    System.out.println("D");
}
else
{
    System.out.println("F");
}

System.out.println("Study hard!");
```

77.32

if-elseif statement

```
double grade = 77.32;
System.out.println(grade);

if(grade >= 90)
{
    System.out.println("A");
}
else if (grade >= 80)
{
    System.out.println("B");
}
else if (grade >= 70)
{
    System.out.println("C");
}
else if (grade >= 60)
{
    System.out.println("D");
}
else
{
    System.out.println("F");
}

System.out.println("Study hard!");
```

77.32

C

if-elseif statement

```
double grade = 77.32;
System.out.println(grade);

if(grade >= 90)
{
    System.out.println("A");
}
else if (grade >= 80)
{
    System.out.println("B");
}
else if (grade >= 70)
{
    System.out.println("C");
}
else if (grade >= 60)
{
    System.out.println("D");
}
else
{
    System.out.println("F");
}

System.out.println("Study hard!");
```

77.32

C

Study hard!

switch statement

```
//code (execute regardless of switch)

switch (variable)
{
    case val1:
        //code to execute if variable = val1
        break;
    case val2:
        //code to execute if variable = 2
        break;
    default:
        //code to execute for any other val
        break;
}

//code (execute regardless of switch)
```

switch statement

```
int age = 20;
System.out.println(age);

switch (age)
{
    case 18:
        System.out.println("Freshman");
        break;
    case 19:
        System.out.println("Sophomore");
        break;
    case 20:
        System.out.println("Junior");
        break;
    case 21:
        System.out.println("Senior");
        break;
    default:
        System.out.println("who knows");
        break;
}
System.out.println("Study hard!");
```

switch statement

```
int age = 20;  
System.out.println(age);
```

```
switch (age)  
{  
    case 18:  
        System.out.println("Freshman");  
        break;  
    case 19:  
        System.out.println("Sophomore");  
        break;  
    case 20:  
        System.out.println("Junior");  
        break;  
    case 21:  
        System.out.println("Senior");  
        break;  
    default:  
        System.out.println("who knows");  
        break;  
}  
System.out.println("Study hard!");
```



20

switch statement

```
int age = 20;  
System.out.println(age);
```

```
switch (age)  
{  
    case 18:  
        System.out.println("Freshman");  
        break;  
    case 19:  
        System.out.println("Sophomore");  
        break;  
    case 20:  
        System.out.println("Junior");  
        break;  
    case 21:  
        System.out.println("Senior");  
        break;  
    default:  
        System.out.println("who knows");  
        break;  
}  
System.out.println("Study hard!");
```




20

switch statement

```
int age = 20;  
System.out.println(age);
```

```
switch (age)  
{  
    case 18:  
        System.out.println("Freshman");  
        break;  
    case 19:  
        System.out.println("Sophomore");  
        break;  
    case 20:  
        System.out.println("Junior");  
        break;  
    case 21:  
        System.out.println("Senior");  
        break;  
    default:  
        System.out.println("who knows");  
        break;  
}  
System.out.println("Study hard!");
```

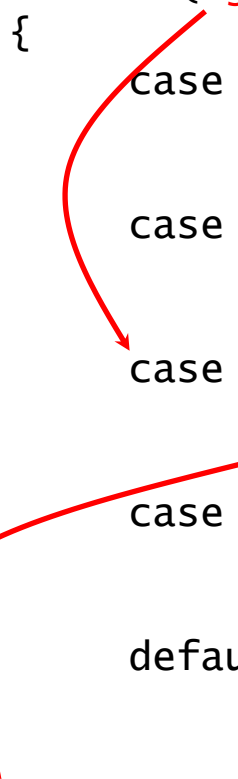


20
Junior

switch statement

```
int age = 20;  
System.out.println(age);
```

```
switch (age)  
{  
    case 18:  
        System.out.println("Freshman");  
        break;  
    case 19:  
        System.out.println("Sophomore");  
        break;  
    case 20:  
        System.out.println("Junior");  
        break;  
    case 21:  
        System.out.println("Senior");  
        break;  
    default:  
        System.out.println("who knows");  
        break;  
}  
System.out.println("Study hard!");
```

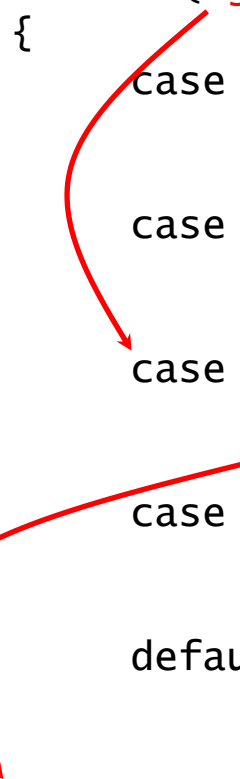


20
Junior

switch statement

```
int age = 20;  
System.out.println(age);
```

```
switch (age)  
{  
    case 18:  
        System.out.println("Freshman");  
        break;  
    case 19:  
        System.out.println("Sophomore");  
        break;  
    case 20:  
        System.out.println("Junior");  
        break;  
    case 21:  
        System.out.println("Senior");  
        break;  
    default:  
        System.out.println("who knows");  
        break;  
}  
System.out.println("Study hard!");
```



20


Junior

Study hard!

switch statement

```
int age = 20;  
System.out.println(age);
```

```
switch (age)  
{  
    case 18:  
        System.out.println("Freshman");  
        //break;  
    case 19:  
        System.out.println("Sophomore");  
        //break;  
    case 20:  
        System.out.println("Junior");  
        //break;  
    case 21:  
        System.out.println("Senior");  
        //break;  
    default:  
        System.out.println("who knows");  
        //break;  
}  
System.out.println("Study hard!");
```




20

Junior

switch statement

```
int age = 20;  
System.out.println(age);
```

```
switch (age)  
{  
    case 18:  
        System.out.println("Freshman");  
        //break;  
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        //break;  
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        System.out.println("Junior");  
        //break;  
    case 21:  
        System.out.println("Senior");  
        //break;  
    default:  
        System.out.println("who knows");  
        //break;  
}  
System.out.println("Study hard!");
```



20


Junior

Senior

switch statement

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int age = 20;  
System.out.println(age);
```

```
switch (age)  
{  
    case 18:  
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        //break;  
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        //break;  
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        System.out.println("Junior");  
        //break;  
    case 21:  
        System.out.println("Senior");  
        //break;  
    default:  
        System.out.println("who knows");  
        //break;  
}  
System.out.println("Study hard!");
```



20

Junior


Senior

Who knows

switch statement

```
int age = 20;  
System.out.println(age);
```

```
switch (age)  
{  
    case 18:  
        System.out.println("Freshman");  
        //break;  
    case 19:  
        System.out.println("Sophomore");  
        //break;  
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        System.out.println("Junior");  
        //break;  
    case 21:  
        System.out.println("Senior");  
        //break;  
    default:  
        System.out.println("who knows");  
        //break;  
}  
System.out.println("Study hard!");
```



20

Junior

Senior


Who knows

Study hard!

switch statement

```
int age = 20;  
System.out.println(age);
```

```
switch (age)  
{  
    case 18:  
        System.out.println("Freshman");  
        //break;  
    case 19:  
        System.out.println("Sophomore");  
        //break;  
    case 20:  
        System.out.println("Junior");  
        //break;  
    case 21:  
        System.out.println("Senior");  
        //break;  
    default:  
        System.out.println("who knows");  
        //break;  
}  
System.out.println("Study hard!");
```



cases act as entry points into a big block of code. They do not segregate the code like if-else blocks do:

```
if  
{ }  
else  
{ }
```

```
20  
Junior  
Senior  
Who knows  
Study hard!
```

switch statement

```
int age = 20;  
System.out.println(age);
```

cases act as entry points into a big block of code. They do not segregate the code like if-else blocks do.

```
switch (age)  
{
```

```
  case
```

```
  case
```

```
  case
```

Remember your break statements!!!

```
    System.out.println("Junior"),  
    //break;
```

```
  case 21:
```

```
    System.out.println("Senior");  
    //break;
```

```
  default:
```

```
    System.out.println("who knows");  
    //break;
```

```
}
```

```
System.out.println("Study hard!");
```

20

Junior

Senior

Who knows

Study hard!