Cyber Security

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Today…

- if
- if-else
- if-elseif
- nested if

Branching (1)

- branching statements are used when making a choice between two or more sequences of steps to execute in a program
- the if statement is one type of branching statement
- example:

```
1 if ( x < y ) :
2 x = y
```

- note that the parentheses () around the *conditional* part of the statement (e.g., x < y) are optional, so you could have:

```
1 if x < y :
2 x = y
```

- it is recommended to use parentheses for code readability, and to ensure that the order of evaluation for compound conditionals is what was intended

Branching (2)

- there are four forms of the **if** statement in Python:

(1) simple if

```
1 if(x<0):
2   print 'x is negative'
```

(2) if-else

```
1 if(x<0):
2   print 'x is negative'
3 else:
4   print 'x is not negative'
```

Branching (3)

(3) if-elseif

```
1 if(x<0):
2     print 'x is negative'
3 elif(x>0):
4     print 'x is positive'
5 else:
6     print 'x is zero'
```

(4) nested if

```
1 if(x<0):
2     print 'x is negative'
3 else:
4     if(x>0):
5         print 'x is positive'
6     else:
7         print 'x is zero'
```

Branching (4)

- example:

```
1  import random
2  i = random.randint(1,10)
3  print('i=' + str(i))
4  if(i<=2):
5      print('one, two, buckle my shoe')
6  elif(i<=4):
7      print('three, four, shut the door')
8  elif(i<=6):
9      print('five, six, pick up sticks')
10 elif(i<=8):
11     print('seven, eight, lay them straight')
12 elif(i<=10):
13     print('nine, ten, a big fat hen')
```

Random a number and check if it is an even or an odd.

Questions and Answers