Exposure CS 2021 for CS1

Chapter 8 Output Slides

For Students

PowerPoint Presentation
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Output Programs

These slides will present a variety of small programs. Each program has a control structure that was introduced in this chapter.

Our concern will be with the output of each program, and more importantly, developing a way to determine program output correctly for programs that involve repetition control structures.

You can expect that on quizzes and/or tests that only a program segment may be shown.

Teacher/Student Versions, Tablet PCs, and Inking

The *"For Teachers"* version of this presentation has 2 or more slides for each program.

The first slide only shows the program.
The other slide(s) show the program, worked out solution, and output.

The *"For Students"* version only has 1 slide for each program with no provided solution or output. Students are expected to work out the solutions either on paper, or ideally they can "ink" directly on their laptops.

```python
# Output0801

print()
for k in range(5):
    print("Hello")
```

```python
# Output0802

print()
for k in range(5):
    print(k)
```

```
1  # Output0803
2
3  print()
4  for k in range(5,10):
5      print(k)
6
7
8
9
10
```

```python
# Output0804

print()
for k in range(10,20,2):
    print(k)
```

```
1  # Output0805
2
3  print()
4  for k in range(10,21,2):
5      print(k)
6
7
8
9
10
```

```python
# Output0806

print()
for k in range(10,0,-1):
    print(k)
```

```
1  # Output0807
2
3  print()
4  for k in range(100,-1,-20):
5      print(k)
6
7
8
9
10
```

```
1  # Output0808
2
3  print()
4  k = 1
5  while k < 100:
6      print(k)
7      k *= 2
8
9
10
```

```
1  # Output0809
2
3  print()
4  k = 1
5  while k < 100:
6      k *= 2
7      print(k)
8
9
10
```

```
1  # Output0810
2
3  print()
4  k = 729
5  while k > 0:
6      print(k)
7      k //= 3
8
9
10
```

```
1  # Output0811
2
3  print()
4  x = 0
5  y = 0
6  while x < 10:
7      y = x + 2
8      x = y + 3
9  print(y)
10
```

```
1  # Output0812
2
3  print()
4  x = 0
5  y = 0
6  while x < 10:
7      y = x * 2
8      x += 3
9  print(x,y)
10
```

```
1  # Output0813
2
3  print()
4  x = 1
5  y = 3
6  z = 5
7  while z > x + y:
8      x = y + z
9      y = x + z
10     z = x - y
11 print(x,y,z)
12
```

```
1  # Output0814
2
3  print()
4  while 2 + 2 == 4:
5      print("EXPOSURE COMPUTER SCIENCE")
6
7
8
9
10
```

```
1  # Output0815
2
3  print()
4  x = 20
5  y = 10
6  while x > y:
7      x -= 1
8      y += 1
9  print(x,y)
10
```

```
1  # Output0816
2
3  print()
4  x = 20
5  y = 10
6  while x < y:
7      x -= 1
8      y += 1
9  print(x,y)
10
```

```
1  # Output0817
2  # How many times will this
3  # program print "Hello" ?
4
5  print()
6  for a in range(5):
7      for b in range(3):
8          print("Hello")
9
10
11
```

```
1  # Output0818
2
3  print()
4  for a in range(5):
5      for b in range(3):
6          print(a,b)
7
8
9
10
```

```python
# Output0819
# How many times will this
# program print "Hello" ?

print()
for a in range(21):
    if a % 5 == 0:
        print("Hello")
```

```python
# Output0820

from random import randint

print()
r = randint(30,50)
if r > 20:
    print("Hello")
else:
    print("Goodbye")

```