Exposure CS 2021 for CS1

Chapter 7 Output Slides

For Students

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Output Programs

These slides will present a variety of small programs. Each program example either has a selection control structure or some type of numeric formatting.

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 selection control structures and numeric formatting.

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
# Output0701

print()
x = 100
if x == 100:
    print("Hello")
```

```python
# Output0702

print()
x = 99
if x == 100:
    print("Hello")
```

```python
# Output0703

print()
x = 101
if x > 100:
    print("Hello")
else:
    print("Goodbye")


```

```python
# Output0704

print()
x = 100
if x > 100:
    print("Hello")
else:
    print("Goodbye")


```

```python
# Output0705

print()
x = 100
if x >= 100:
    print("Hello")
else:
    print("Goodbye")


```

```
1  # Output0706
2
3  grade = eval(input("Enter grade 9-12: "))
4  if grade == 9:
5      print("Freshman")
6  if grade == 10:
7      print("Sophomore")
8  if grade == 11:
9      print("Junior")
10 if grade == 12:
11     print("Senior")
12
```

What is the output after the user enters 10?

```python
# Output0707

print()
gpa = 3.88
if gpa >= 3.9:
    print("Summa Cum Laude")
if gpa >= 3.75:
    print("Magna Cum Laude")
if gpa >= 3.5:
    print("Cum Laude")
if gpa >= 2.65:
    print("Graduate without Honors")
if gpa < 2.65:
    print("Did not graduate")
```

```python
# Output0708

print()
gpa = 3.88
if gpa >= 3.9:
    print("Summa Cum Laude")
elif gpa >= 3.75:
    print("Magna Cum Laude")
elif gpa >= 3.5:
    print("Cum Laude")
elif gpa >= 2.65:
    print("Graduate without Honors")
else:
    print("Did not graduate")
```

```python
# Output0709

print()
sat = 1100
if sat >= 1200:
    print("Admitted: Yes")
else:
    print("Admitted: No")
print()
income = 19000
if income < 20000:
    print("Financial Aid: Yes")
else:
    print("Financial Aid: No")
```

```python
# Output0710

print()
sat = 1100
if sat >= 1200:
    print("Admitted: Yes")
    print()
    income = 19000
    if income < 20000:
        print("Financial Aid: Yes")
    else:
        print("Financial Aid: No")
else:
    print("Admitted: No")
```

```
1  # Output0711
2
3  print()
4  print(9)
5  print(98)
6  print(987)
7  print(9876)
8
9
10
```

```
1  # Output0712
2
3  print()
4  print("{:04}".format(9))
5  print("{:04}".format(98))
6  print("{:04}".format(987))
7  print("{:04}".format(9876))
8
9
10
```

```
1  # Output0713
2
3  print()
4  print("{:4}".format(9))
5  print("{:4}".format(98))
6  print("{:4}".format(987))
7  print("{:4}".format(9876))
8
9
10
```

```python
# Output0714

print()
print("{:5,}".format(9))
print("{:5,}".format(98))
print("{:5,}".format(987))
print("{:5,}".format(9876))
print("{:5,}".format(98765))


```

```python
# Output0715

print()
print("{:6,}".format(9))
print("{:6,}".format(98))
print("{:6,}".format(987))
print("{:6,}".format(9876))
print("{:6,}".format(98765))


```

```
1  # Output0716
2
3  print()
4  print("{:,}".format(9))
5  print("{:,}".format(98))
6  print("{:,}".format(987))
7  print("{:,}".format(9876))
8  print("{:,}".format(98765))
9
10
```

```
1  # Output0717
2
3  print("{:7.3f}".format(8))
4  print("{:7.3f}".format(23.4))
5  print("{:7.3f}".format(56.78))
6  print("{:7.3f}".format(1234.5678))
7
8
9
10
```

```python
# Output0718

a = 7
b = 34.9
c = 77.77
d = 56.1234
e = 234.56789

print()
print("{:.3f}".format(a))
print("{:.3f}".format(b))
print("{:.3f}".format(c))
print("{:.3f}".format(d))
print("{:.3f}".format(e))
```

```python
# Output0719

a = 7
b = 34.9
c = 77.77
d = 56.1234
e = 234.56789

print()
print("${:.2f}".format(a))
print("${:.2f}".format(b))
print("${:.2f}".format(c))
print("${:.2f}".format(d))
print("${:.2f}".format(e))
```

```
1  # Output0720
2
3  print("${:13,.2f}".format(5000))
4  print("${:13,.2f}".format(94000.2))
5  print("${:13,.2f}".format(8888888.88))
6  print("${:13,.2f}".format(12121212.567))
7  print("${:13,.2f}".format(987987.2345))
8
9
10
```