Finlatics Data Science
Capsule 2

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March 6, 2024

Contents

Task 1

Leap year

1.1 PYTHON CODE:

```
print("input year:")
year = int(input())
if((year%4) == 0):
print("Leap year")
else:
print("Not a leap year")
```

1.2 Code

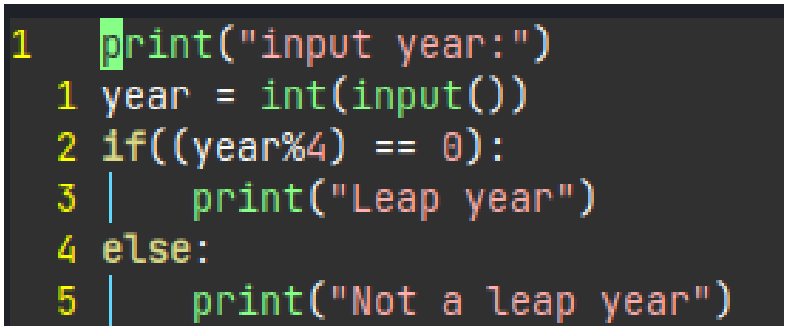

Figure 1.1: Code

1.3 Output

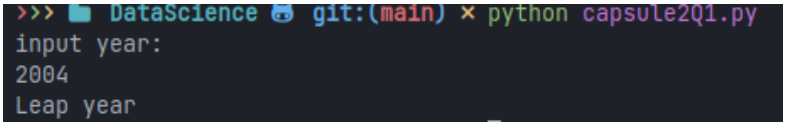

Figure 1.2: Output

Task 2

Vowel Count

2.1 PYTHON CODE:

```
print("Enter word:")
word = input().lower()
vowel_count = 0
for char in word:
if char in ('a', 'e', 'i', 'o', 'u'):
vowel_count += 1
print(vowel_count)
```

2.2 Code

```
1   print("Enter word:")
  1 word = input().lower()
  2 vowel_count = 0
  3 for char in word:
  4 |   if char in ('a', 'e', 'i', 'o', 'u'):
  5 |   |   vowel_count += 1
  6 print(vowel_count)
```

Figure 2.1: Code

2.3 Output

```
>>> DataScience  git:(main) ✗ python capsule2Q2.py
Enter word:
Vowel
2
```

Figure 2.2: Output

Task 3

Name starting with 'A'

3.1 PYTHON CODE:

```
import re
print("input 6 names")
names = []
for i in range(6):
names.append(input())
pattern = r'^a'
print("\noutput:")
for name in names:
    if re.search(pattern, name.lower()):
        print(name)
```

3.2 Code

```
1   import re
  1 print("input 6 names")
  2 names = []
  3 for i in range(6):
  4 |   names.append(input())
  5 pattern = r'^a'
  6 print("\noutput:")
  7 for name in names:
  8 |   if re.search(pattern, name.lower()):
  9 |   |   print(name)
```

Figure 3.1: Code

3.3 Output

```
>>> DataScience git:(main) x python capsule2Q3.py
input 6 names
Avae
Karrie
Maria
Alba
Jose
Troy

output:
Avae
Alba
```

Figure 3.2: Output

Task 4

Even-Squared, Odd-Cubed

4.1 PYTHON CODE:

```
print("input 10 numbers")
numbers = []
for i in range(10):
    numbers.append(int(input()))
print("\noutput:")
for number in numbers:
    if number%2==0:
        print(number**2)
    else:
        print(number**3)
```

4.2 Code

```
1   print("input 10 numbers")
  1 numbers = []
  2 for i in range(10):
  3 |   numbers.append(int(input()))
  4 print("\noutput:")
  5 for number in numbers:
  6 |   if number%2==0:
  7 |   |   print(number**2)
  8 |   else:
  9 |   |   print(number**3)
```

Figure 4.1: Code

4.3 Output

```
>>> DataScience git:(main) × python capsule2Q4.py
input 10 numbers
10
12
1
2
3
4
5
6
7
8

output:
100
144
1
4
27
16
125
36
343
64
```

Figure 4.2: Output

Task 5

Flower Shop

5.1 PYTHON CODE:

```
print("Enter the count of roses and delivery distance")
x, y = input().split()
count = int(x)
dist = int(y)
if dist in range(0, 5):
print(count*10 + 25)
elif dist in range(5, 10):
print(count*10 + 50)
elif dist > 10:
print(count*10 + 75)
```

5.2 Code

```
print("Enter the count of roses and delivery distance")
x, y = input().split()
count = int(x)
dist = int(y)
if dist in range(0, 5):
    print(count*10 + 25)
elif dist in range(5, 10):
    print(count*10 + 50)
elif dist > 10:
    print(count*10 + 75)
```

Figure 5.1: Code

5.3 Output

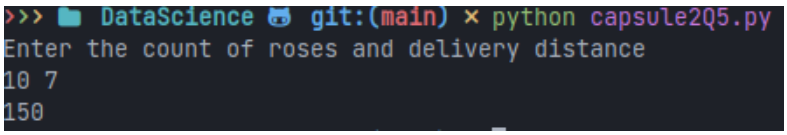

Figure 5.2: Output