

Finlatics Data Science

Capsule 1

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Contents

1	Greet The User and Swap Two Values	2
1.1	PYTHON CODE:	2
1.2	Code	3
1.3	Output	3
2	Area of a circle	4
2.1	PYTHON CODE:	4
2.2	Code	4
2.3	Output	4
3	Age Calculator	6
3.1	PYTHON CODE:	6
3.2	Code	6
3.3	Output	7
4	Bakery	8
4.1	PYTHON CODE:	8
4.2	Code	8
4.3	Output	8
5	Simple Interest	9
5.1	PYTHON CODE:	9
5.2	Code	9
5.3	Output	10

Task 1

Greet The User and Swap Two Values

1.1 PYTHON CODE:

```
1 name = input()
2 print("Hello " + name)
3 print("Enter two values:")
4 x,y = input().split()
5 print("original x: " + x)
6 print("original y: " + y)
7 z = x
8 x = y
9 y = z
10 print("swapped x: " + x)
11 print("swapped y: " + y)
```

1.2 Code

```
1 name = input()
1 print("Hello " + name)
2 print("Enter two values:")
3 x,y = input().split()
4 print("original x: " + x)
5 print("original y: " + y)
6 z = x
7 x = y
8 y = z
9 print("swapped x: " + x)
10 print("swapped y: " + y)
```

Figure 1.1: Code

1.3 Output

```
>>> DataScience git:(main) × python capsule1Q1.py
MyName
Hello MyName
Enter two values:
FirstValue SecondValue
original x: FirstValue
original y: SecondValue
swapped x: SecondValue
swapped y: FirstValue
```

Figure 1.2: Output

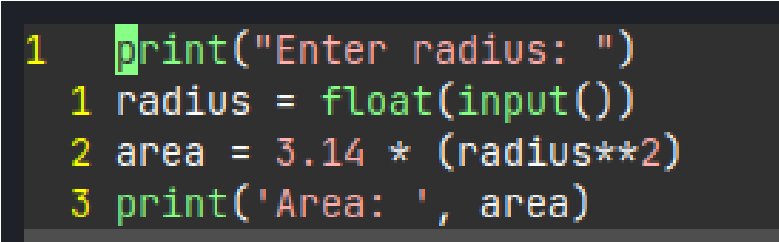
Task 2

Area of a circle

2.1 PYTHON CODE:

```
1 print("Enter radius: ")
2 radius = float(input())
3 area = 3.14 * (radius**2)
4 print('Area: ', area)
```

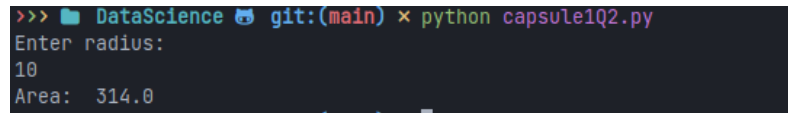
2.2 Code



```
1 print("Enter radius: ")
  radius = float(input())
2 area = 3.14 * (radius**2)
3 print('Area: ', area)
```

Figure 2.1: Code

2.3 Output

A terminal window with a dark background. The prompt is '>>>'. The first line shows the command 'python capsule1Q2.py' being executed. The second line is the prompt 'Enter radius:'. The third line is the input '10'. The fourth line is the output 'Area: 314.0'.

```
>>> DataScience git:(main) × python capsule1Q2.py
Enter radius:
10
Area: 314.0
```

Figure 2.2: Output

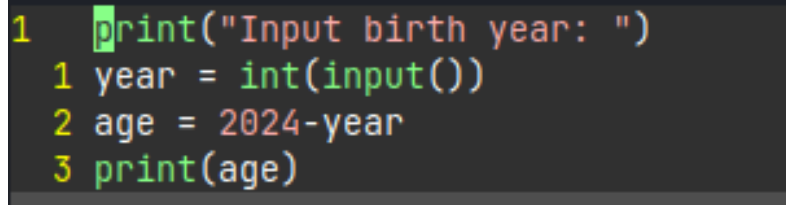
Task 3

Age Calculator

3.1 PYTHON CODE:

```
1 print("Input birth year: ")
2 year = int(input())
3 age = 2024-year
4 print(age)
```

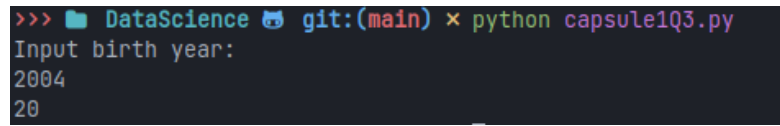
3.2 Code



```
1 print("Input birth year: ")
2 year = int(input())
3 age = 2024-year
4 print(age)
```

Figure 3.1: Code

3.3 Output

A terminal window with a dark background. The prompt is '>>>'. The first line of input is 'python capsule1Q3.py'. The second line of input is 'Input birth year:'. The third line of input is '2004'. The fourth line of input is '20'.

```
>>> DataScience git:(main) x python capsule1Q3.py
Input birth year:
2004
20
```

Figure 3.2: Output

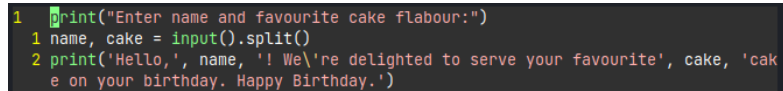
Task 4

Bakery

4.1 PYTHON CODE:

```
1 print("Enter name and favourite cake flavour:")
2 name, cake = input().split()
3 print('Hello,', name, '! We're delighted to serve your
    favourite', cake, 'cake on y
4 our birthday. Happy Birthday.')
```

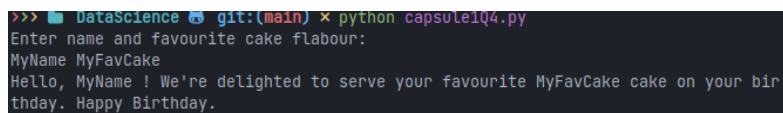
4.2 Code



```
1 print("Enter name and favourite cake flavour:")
1 name, cake = input().split()
2 print('Hello,', name, '! We're delighted to serve your favourite', cake, 'cak
    e on your birthday. Happy Birthday.')
```

Figure 4.1: Code

4.3 Output



```
>>> DataScience git:(main) x python capsule1q4.py
Enter name and favourite cake flavour:
MyName MyFavCake
Hello, MyName ! We're delighted to serve your favourite MyFavCake cake on your bir
thday. Happy Birthday.
```

Figure 4.2: Output

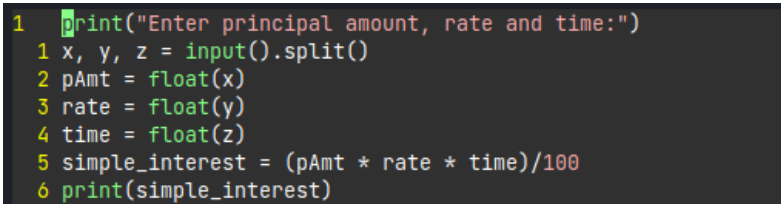
Task 5

Simple Interest

5.1 PYTHON CODE:

```
1 print("Enter principal amount, rate and time:")
2 x, y, z = input().split()
3 pAmt = float(x)
4 rate = float(y)
5 time = float(z)
6 simple_interest = (pAmt * rate * time)/100
7 print(simple_interest)
```

5.2 Code



```
1 print("Enter principal amount, rate and time:")
2 x, y, z = input().split()
3 pAmt = float(x)
4 rate = float(y)
5 time = float(z)
6 simple_interest = (pAmt * rate * time)/100
7 print(simple_interest)
```

Figure 5.1: Code

5.3 Output

```
>>> DataScience git:(main) ✖ python capsule1Q5.py
Enter principal amount, rate and time:
1000 10 2
200.0
```

Figure 5.2: Output