

Algorithm WorkBench Questions of Chapter 2

Question:1

Write Python code that prompts the user to enter his or her age and assigns the user's input to an integer variable named age.

```
In [1]: 1 age = input("Enter your age:")
        2 age = int(age)
        3 print("Your age is:",age)
```

```
Enter your age:21
Your age is: 21
```

Question:2

Write Python code that prompts the user to enter his or her favorite color and assigns the user's input to a variable named color.

```
In [2]: 1 color = input("Enter your Favourite color:")
        2 print("Your favourite color is:",color)
```

```
Enter your Favourite color:white
Your favourite color is: white
```

Question:3

Write assignment statements that perform the following operations with the variables a, b, and c:

1. Adds 2 to a and assigns the result to b
2. Multiplies b times 4 and assigns the result to a
3. Divides a by 3.14 and assigns the result to b
4. Subtracts 8 from b and assigns the result to a

In [3]:

```
1 # 1.
2 a = 12
3 b = a + 2
4 print(b)
5
6 # 2.
7 b = 11
8 a = b * 4
9 print(a)
10
11 # 3.
12 a = 10
13 b = a/3.14
14 print(b)
15
16 # 4.
17 b = 21
18 a = b-8
19 print(a)
```

```
14
44
3.184713375796178
13
```

Question:4

Assume the variables result, w, x, y, and z are all integers, and that w = 5, x = 4, y = 8, and z = 2. What value will be stored in result after each of the following statements execute?

1. result = x + y
2. result = z * 2
3. result = y / x
4. result = y - z
5. result = w // z

In [4]:

```
1 w = 5
2 x = 4
3 y = 8
4 z = 2
5
6 print("result 1 is:",x+y)
7 print("result 2 is:",z*2)
8 print("result 3 is:",y/x )
9 print("result 4 is:",y-z)
10 print("result 5 is:",w//z)
```

```
result 1 is: 12
result 2 is: 4
result 3 is: 2.0
result 4 is: 6
result 5 is: 2
```

Question:5

Write a Python statement that assigns the product of 10 and 15 to the variable product

In [5]:

```
1 product = 10 * 15
2 print(product)
```

150

Question:6

Write a Python statement that subtracts the variable down_payment from the variable total and assigns the result to the variable due.

In [6]:

```
1 total = 5000
2 down_payment = 1000
3 due = total - down_payment
4 print(due)
```

4000

Question:7

Write a Python statement that multiplies the variable subtotal by 0.15 and assigns the result to the variable total.

In [7]:

```
1 subtotal = 1000
2 total = subtotal * 0.15
3 print(total)
```

150.0

Question:8

What would the following display?

In [8]:

```
1 a = 5
2 b = 2
3 c = 3
4 result = a + b * c
5 print(result) # first it will multiply b and c then add it to a
```

11

Question:9

What would the following display?

In [9]:

```
1 num = 99
2 num = 5
3 print(num)
```

5

Question:10

Assume the variable sales references a float value. Write a statement that displays the value rounded to two decimal points.

In [10]:

```
1 sales = 1000.12345
2 sales = format(sales, '.2f')
3 print(sales)
```

1000.12

Question:11

Assume the following statement has been executed: number = 1234567.456

1. Write a Python statement that displays the value referenced by the number variable formatted as 1,234,567.5

In [11]:

```
1 number = 1234567.456
2 number = format(number, ',.1f')
3 print(number)
```

1,234,567.5

Question:12

What will the following statement display?

1. `print('X\tO\tX\nO\tX\tO\nX\tO\tX\n')`

In [12]:

```
1 print('X\tO\tX\nO\tX\tO\nX\tO\tX\n')
```

```
X      O      X
O      X      O
X      O      X
```

Question:13 to 15

these questions are based on turtle graphics concept

In []:

1