1. Answer the questions

* How to check a variable’s type?

Using **type** function.

For example:

variable = type("Welcome to Viet Nam")

print(variable)

<class 'str'>

variable = type(3.14)

print(variable)

<class 'float'>

variable = type("3.14")

print(variable)

<class 'str'>

* In what cases, you will get ***​SyntaxError***​ from the compiler telling you that some of your variables have ​**invalid names**​? Can you give 3 different examples of **​invalid names**​?

Invalid names/illegal names when:

* name does not begin with a letter, for example: 97yob
* name contains illegal characters, for example: gogo!
* name is similar to a Python keywords, for example: except

→ SyntaxError: invalid syntax

2. ​Area ​of a ​circle ​

r = float(input('Radius? '))

pi = 3.14

area = pi\*(r\*\*2)

print('Area =', area)

**For example:**

Radius? 3

Area = 28.26

Radius? 2.5

Area = 19.625

3. Convert ​**Celsius ​ ( ​0 ​C)** into ​**Fahrenheit ​ ( ​0 ​F)**

Cel = float(input('Enter the temperature in Celsius? '))

Fah = Cel\*9/5+32

print(Cel," (C) = ",Fah," (F)")

**For example:**

Enter the temperature in Celsius? 10

10.0 (C) = 50.0 (F)

Enter the temperature in Celsius? 19

19.0 (C) = 66.2 (F)

4. Turtle Exercise

4.1. A square

from turtle import \*

speed(-1)

color('green', 'yellow')

begin\_fill()

for i in range(4):

forward(300)

left(360/4)

end\_fill()

mainloop()

4.2. An equilateral triangle

from turtle import \*

speed(-1)

color('green', 'yellow')

begin\_fill()

for i in range(3):

forward(300)

left(180-180/3)

end\_fill()

mainloop()

4.3. A circle

from turtle import \*

color('green', 'yellow')

begin\_fill()

circle(100)

end\_fill()

mainloop()

4.4. Multi-circles

n = int(input('Number of circles? '))

from turtle import \*

color('green')

speed(-1)

for i in range(n):

    circle(100)

    left(360/n)

mainloop()

Number of circles? 6

Number of circles? 40