

PYTHON PROGRAMMING
GATE DA/DSA

Problem Solving :

1. Which of the following is allowed in Python?
- a) $x + y = 2$, $x * y == 2$
 - b) $\underline{x} * \underline{x} = 2$
 - c) $(2) = (x)$
 - d) $x y = 2$
 - e) None of these.

2. What is the value of variable 'n' from the code below?

once = "umbrella"

repeat = "ella"

n = once + (repeat + " ") * 4

umbrella + (ella - ella - ella - ella)

- a) Umbrella
- b) umbrellaellaellaella
- c) umbrella ella ella ella
- d) ambrella4

3. You run the code below:

```
us_gold = 46
uk_gold = 27
russia_gold = 1
```

$$46 + 27 + 1 \\ 74$$

total_gold = us_gold + uk_gold + russia_gold

print(total_gold) ← 74

russia_gold += 100 → 101 russia_gold < 101

print(total_gold) ↴

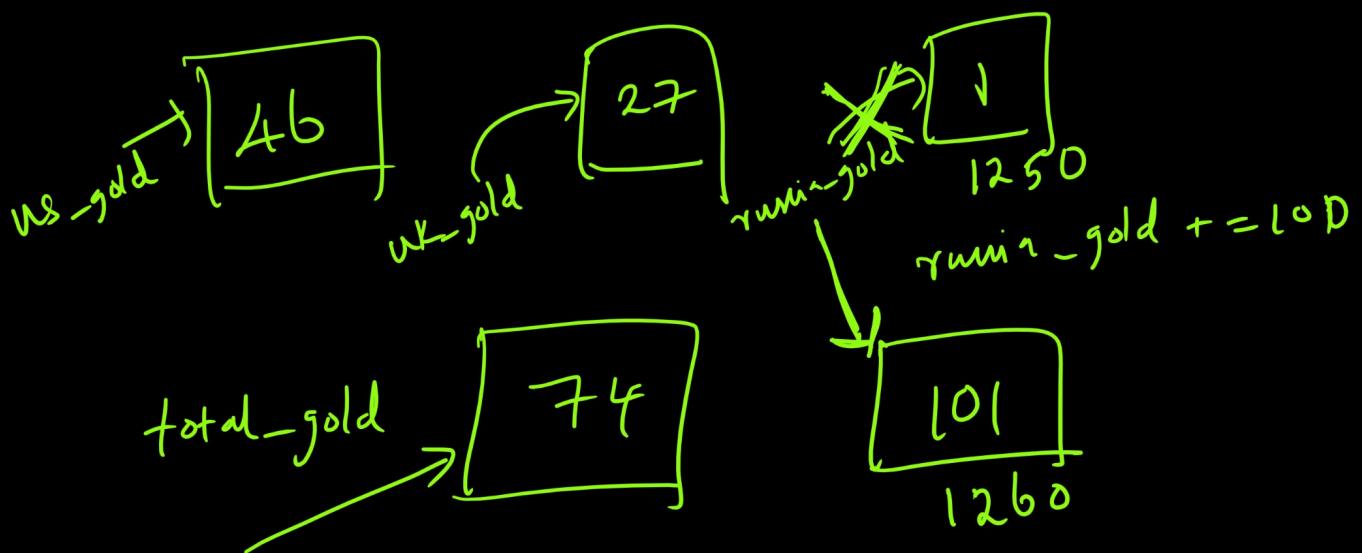
a) 74 ✓ 74

b) ✗ 74 74

74

c) 74 174

d) 174 74



4. Which of the following is an valid variable?

a) For ✓ b) While c) g_n d) 23In.

For = 10

While = 12

g_n = 100

5. What is printed when you type "Right" in the input entry?

Code is given below:

```
n = input ("Type Something : ")
```

While n == "right": X

 print ("You are Correct")

 print ("Incorrect Answer")

a) Incorrect answer

b) Incorrect Answer

c) You are Correct

d) Error.

6. What does the below code print?

```
s = "6.00 is 6.0001 and 6.0002"
```

```
→ new_str = ""
```

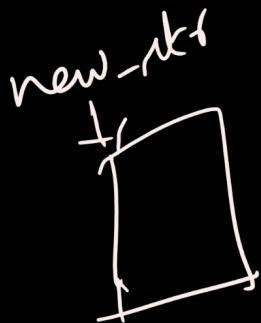
```
→ new_str += s[-1]
```

```
new_str += s[0]
```

```
new_str += s[4:-30]
```

```
new_str += s[13:10:-1]
```

```
print(new_str)
```



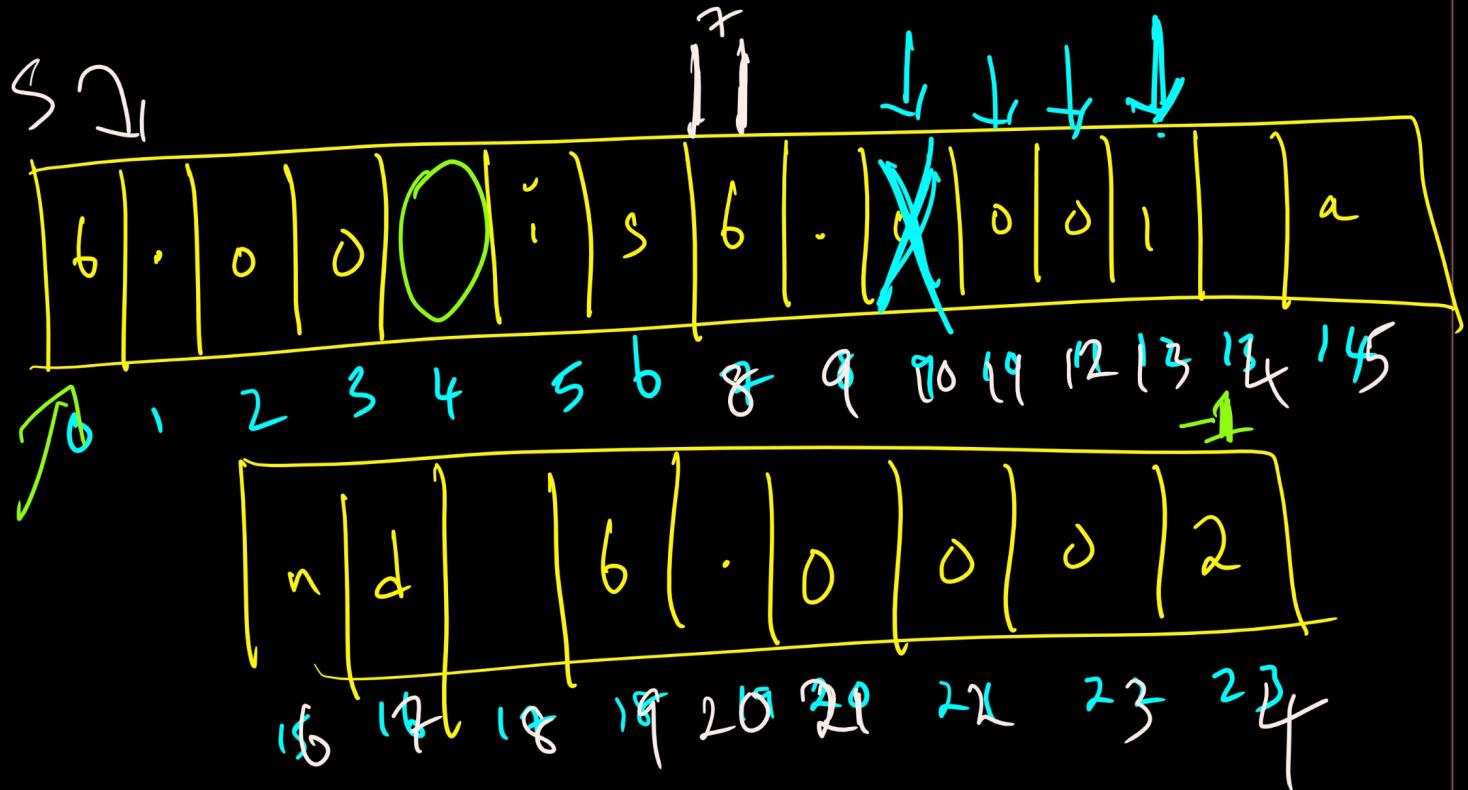
a) 260000

b) 26100

c) ~~26100~~

d) Nothing, it's an error.

e) 6.00 is 6.0001 and 6.0002



new, new



$s \{ 13 : 10 : -1 \}$

26-100

$s[4 : : 30]$ step size.
↑ start index ↑ end index

26 100

7. How many times "Gate DA"
will be printed in below code?
 $S_1 = \text{"mit_u_rock"} \rightarrow 10$
 $S_2 = \text{"i_rule_mit"} \rightarrow 10$
if $\text{len}(S_1) == \text{len}(S_2)$: ✓

~~m~~ for char1 in ~~S1~~:
for char2 in ~~S2~~:
 if char1 == char2:
 print("Gate DA")
 break

- a) 4 b) 6 c) 7

- d) 8 e) None of these.
f) Error.

8. $L = ["life", "answer", 42, 0]$

for v in L :

if $v == 0$:

$L[v] = "Venky"$

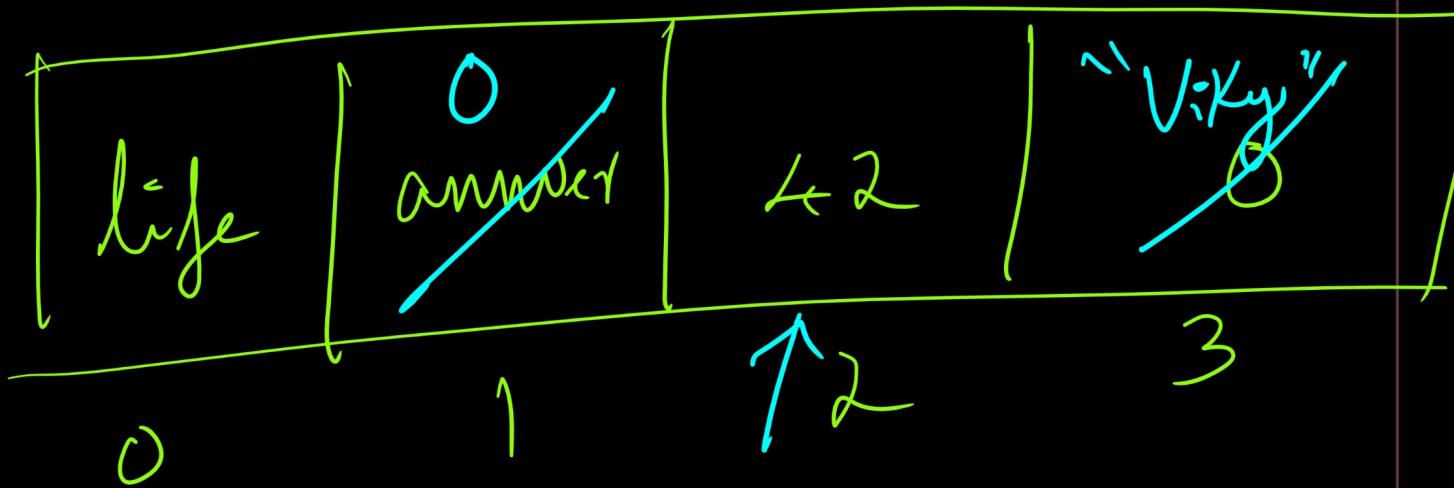
elif $v == 42$:

$L[3] = "ViKy"$

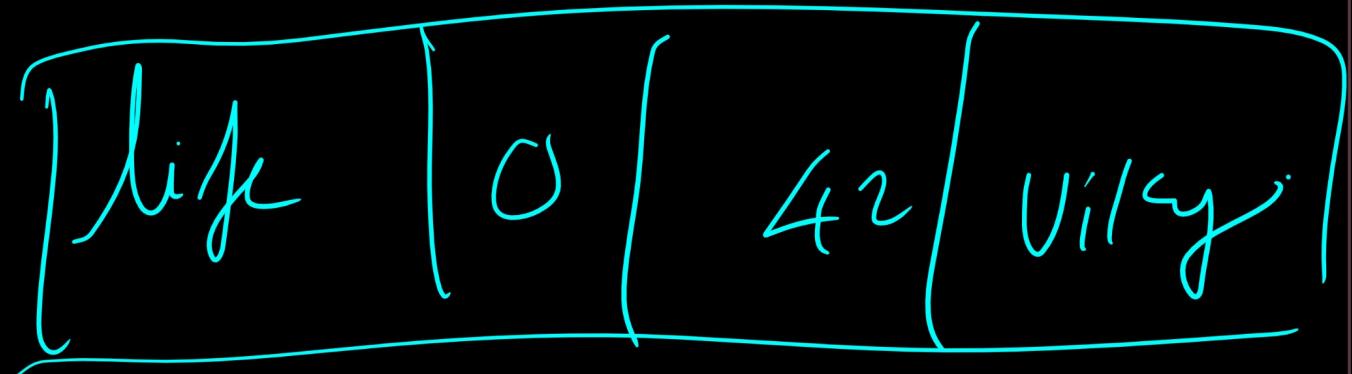
$L[1] = 0$

print(L)

- a) $['life', 'answer', 42, 0]$
- b) $['Venky', 0, 42, 'ViKy']$
- c) ~~Error~~
- d) ~~None of These.~~



- ① $\vee : \text{life}$
- ② $\vee : \text{answer}$
- ③ $\vee : 42$
- ④ $\vee : \text{"Viky"}$



9. What is the value of

L3

after you execute
all the operations given below?

$$L_1 = ['re']$$

$$L_2 = ['mi'] \quad L_3 = ['do']$$

$$L_3 = ['do']$$

$$L_4 = L_1 + L_2 \quad L_4 = ['re'; 'mi']$$

$$\begin{array}{l} L_3 \cdot \text{extend}(L_4) \\ \hline L_3 \cdot \text{sort}() \end{array} \quad \begin{array}{l} L_3 \\ ['do'; 're'; 'mi'] \\ \hline ['do'; 'mi'; 're'] \end{array}$$

Ques Let $L_3[0] = [\text{'mi}', \text{'re'}]$

$L_3 = \text{append}([(\text{'fa'}, \text{'la'})])$

a) $[\text{'re'}, \text{'mi'}, [\text{'fa'}, \text{'la'}]]$ $\begin{bmatrix} \text{'mi'}, \text{'re'}, \\ [\text{'fa'}, \text{'la'}] \end{bmatrix}$

b) $[\text{'mi'}, \text{'re'}, \text{'fa'}, \text{'la'}]$

c) $[\text{'do'}, \text{'mi'}, [\text{'fa'}, \text{'la'}]]$

d) $[\text{'mi'}, \text{'re'}, [\text{'fa'}, \text{'la'}]]$

e) None of these

f) Error.

10. Given code, what will be

printed?

$L = 3$


for i in range(len(L)):
 print(i)

Error

a) 0
1
2

b) 0 1 2

c) 1 2 3

d) 1
2
3

e) None of them.

a) You are not allowed to name an integer with variable name L.

b) range is not allowed to have an expression inside its parenthesis

(c) You are not allowed to call len on an integer

d) You are not allowed to print the loop variable.

$$\text{ii. } L_1 = ["bacon", "eggs"]$$

$$L_2 = ["toast", "\underline{\text{jam}}"]$$

$$\text{brunch} = L_1 \xrightarrow{L_1} \boxed{\begin{array}{|c|c|c|} \hline \text{bacon} & \text{eggs} & \text{juice} \\ \hline \end{array}}$$

$$L_1 \cdot \text{append} ("juice") \nearrow 1250$$

$$\text{brunch} \cdot \text{extend} (L_2) \xrightarrow{\text{brunch}} \boxed{\begin{array}{|c|c|c|c|} \hline \text{bacon} & \text{eggs} & \text{juice} & \text{toast} \\ \hline \text{jam} \\ \hline \end{array}}$$

What is value of brunch?

a) ['bacon', 'eggs', 'toast', 'jam']

b) ['bacon', 'eggs', 'juice', ['toast', 'jam']]

c) $\left[\text{'bacon'}, \text{'eggs'}, \text{'juice'}, \underline{\text{'jam'}}, \text{'toast'} \right]$

d) $\left[\text{'bacon'}, \text{'eggs'}, [\text{'toast'}, \text{'jam'}] \right]$

e) Error

~~f)~~ None of These.

$[\text{bacon}, \text{eggs}, \text{juice}, \text{toast}, \underline{\text{jam}}]$

[2. What is the output of following?

$\text{any} \left(\underline{[2 > 8]}, \underline{[4 > 2]}, \underline{1 > 2} \right)$

a) Error

b) True c) $4 > 2$

d) False

e) None

13. What is the output of following?

all(3, 0.4, 2)

a) True

b) False ✓ Error d) 0

Part of list(iterator).
3 arguments, You need to
pass single argument.

14. What are the outcomes of
following?

num(2, 4, 6) ← Error.

num([1, 2, 3]) ← 6.

a) 12, 6 c) 6, 12

b) ✓ Error, 6 d) Error, Error

e) [2, Error]

15. What will be the output
for following ?

$\min \left(\max (\text{False}, -3, -4), 2, 7 \right)$

a) 2 b) -3 c) -4

d) Error e) None of these
(false)

f) 0

$\max (\text{False}, -3, -4)$

↑

0

False

$\min (\text{False}, 2, 7)$

↑

0

↑
False.

[b] What is the output of following?

`list(enumerate([2,3]))`

a) Error

b) $\left[(1, 2), (2, 3) \right]$

c) $\left[(2, 3) \right]$

d) $\left[(2, 0), (3, 1) \right]$

e) None of them.

$$\begin{bmatrix} 2 & 3 \\ 0 & 1 \end{bmatrix}$$

$$\left[(0, 2), (1, 3) \right]$$

17. The function `complex('2-3j')`

is valid but the function

`Complex('2 - 3j')` is invalid.

State whether this statement is true or false.

1 1, 0

→ Invalid due to space in string.

18. What is the output?

- A.) $\text{float}('1e-003') \rightarrow 1 \times 10^{-3} \Rightarrow 0.001$
 - B.) $\text{float}('2e+003') \rightarrow 2 \times 10^3$
 - C.) $\text{float}() \rightarrow 0.0$
 - D.) $\text{Complex}() \rightarrow 0j$
- a) $\frac{0.001}{A}$ b) $\frac{2000.0}{B}$ c) $\frac{0.0}{C}$ d) $\frac{0j}{D}$

19. Output of following function:

$\text{float}(' -12345 \backslash n')$
5 spaces.

a) -12345.0

b) -12345.0

c) Error

d) -12345.6000

7. What will be the value of Virat in the following code?

Virat = Rohit

Virat += Sachin

print(Virat)

- a) Syntax Error
- b) Type Error
- c) Value Error
- d) Name Error

21. What does ~~~~~(~5) evaluate
to ?

$$\begin{aligned} \sim(-b) &= -(-b+1) \\ \sim(-5) &= -(-5+1) \\ \sim 5 &= -4 \\ \sim b &= -(b+1) \end{aligned}$$

- a) +5
- d) -5
- g) Error

- b) -11
- c) +6
- h) None

- c) +11
- f) -6

$$\textcircled{\sim} 5 = -b$$

$$\textcircled{\sim\sim} 5 = 5$$

$$\textcircled{\sim\sim\sim} 5 = -b$$

$$\textcircled{\sim\sim\sim\sim} 5 = 5$$

$$\textcircled{\sim\sim\sim\sim\sim} 5 = -b$$

$$\textcircled{\sim\sim\sim\sim\sim\sim} 5 = 5$$

22. Which of the following is incorrect?

a) $x = \textcircled{0b}101 -$

$$x = 10^1 + 10^2 + 10^3 + 10^4$$

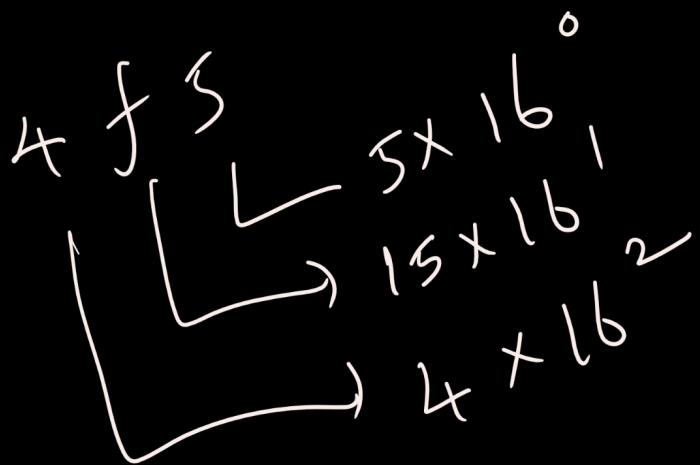
b) $x = 0x4f5$

c) $x = 19023$

d) $\checkmark x = \textcircled{0}3964$ zero not '0'

e) None of These.

$x = \{x\}$



23. What is the output?

$x = [`ab', `cd']$

for i in x:

i.upper()

$\boxed{ab \boxed{cd}}$

print(x)

a) $\cancel{[`ab', `cd']}$ b) $[`AB', `CD']$

c) $[None, None]$ d) None of the above

e) Error.

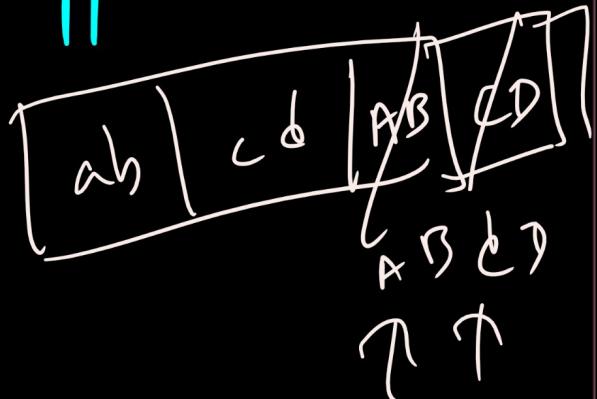
24. What is the output?

$x = [\'ab\', \'cd\']$

for i in x:
 ~~as c & AB~~
 x.append(~~(D)~~
 ~~i. upper()~~)

print(x)

Care of
Infinite
loop



a) $[\'ab\', \'cd\']$

b) $[\'AB\', \'CD\']$

c) $[\'ab\', \'cd\', \'AB\', \'CD\']$

d) None of these.

25. What will be the output?

$x = [\text{'ab'}, \text{'cd'}]$

for i in range(len(x)):
 x.append(x[i].upper())

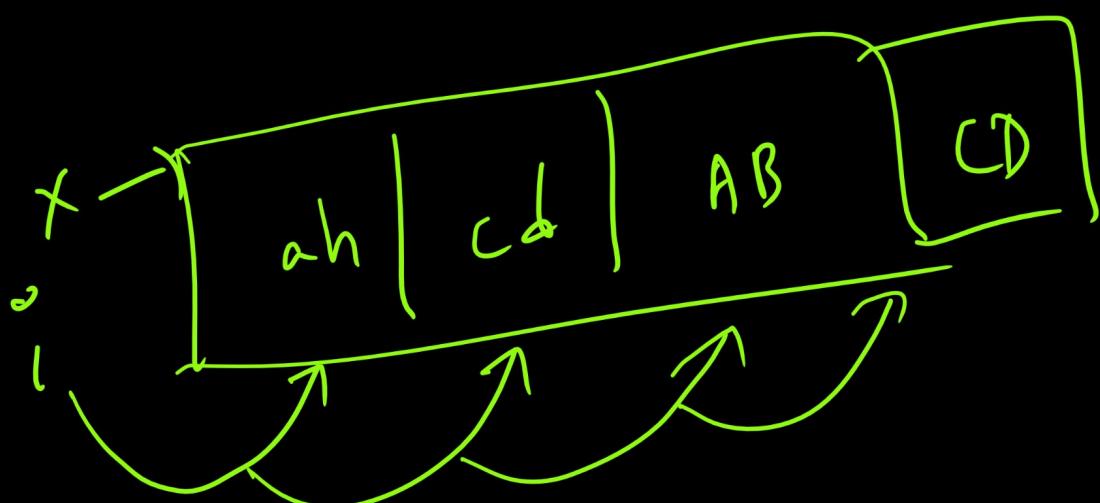
print(x)

a) $[\text{'ab'}, \text{'cd'}]$

b) $[\text{'AB'}, \text{'CD'}]$

c) $[\text{'ab'}, \text{'cd'}, \text{'AB'}, \text{'CD'}]$

d) Infinite loop.



for i in range(len(x)):
i → {0, 1} [0, 1]
range(2)
range(len(x))

26. i = 1

While True:

if i % 3 == 0:
break

print(i)

i += 1

What will be the output?

- a) 1 b) 0 c) 1 d) 123
 2 1 2
 2
- e) 1 2 f) None g) Error .

27.

True = False ← Error case

Keyword: While True:

Syntax Error:

```

print ("Venky")
break
print ("late DA")
  
```

Shell I continue with functions ?.

π clock