

LAB 07: CLASS FOLDER

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Hello World

This is my classwork for the Lab07 assignment.
Feel free to leave any comment for me.

Thanks & Regards!



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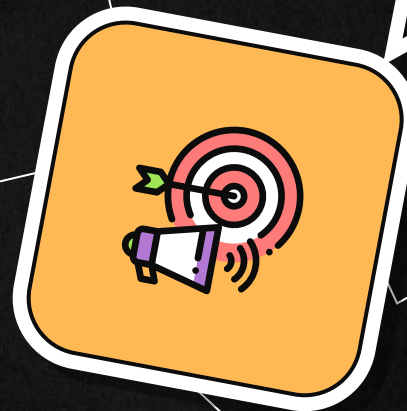
Diagram the Execution of
 $r = q.f()$

Challenges

01

Part A

Diagram the two Class Folders



...

About

M



A diagram illustrating the structure of a class. A central orange box with a white border contains the class attributes and methods. To its right, a small yellow box with a white border contains the letter 'A'. Below the central box, a yellow rounded rectangle with a white border contains the text 'Class A'. A white line connects the central box to the 'Class A' box. The background is black with various white and colored shapes: a white circle in the top left, a red starburst in the bottom left, a blue teardrop shape in the bottom left, and a white jagged starburst in the top right.

A

- Class Attributes:

x = 3

y = 5

- Methods:

`__init__(self, y)`

`f(self)`

`g(self)`

Class A



The diagram illustrates a class hierarchy. A central orange box represents 'Class B' and contains its attributes and methods. A smaller orange box labeled 'B(A)' is attached to the top of this box, indicating inheritance from Class A. A line connects the 'Class B' box to a label 'Class B' in the bottom right. The background is black with decorative elements: a red starburst on the left, a blue shape at the bottom left, and a white starburst on the right.

B(A)

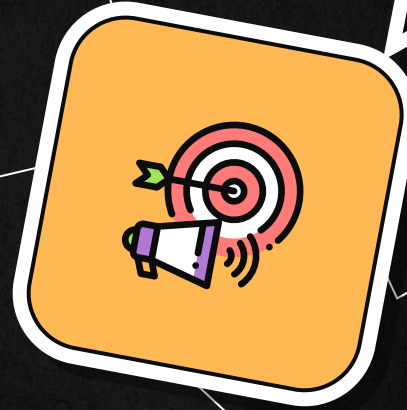
- Class Attributes:
y = 4
z = 10
- Methods:
__init__(self, x, y)
f(self)

Class B

02

Part B

Diagram the Execution of $p = A(1)$



...



1

A

id1

Create folder in
heap space

2

Call Frame

1

self

id1

y

1

A.__init__

Heap Space

A

id1

Call to
A.__init__(self, 1)

3

Call Frame

self

id1

y

1

A.__init__

Heap Space

A

y

1

id1

Execute
self.y = y

4

Call Frame

self

WHOLE FRAME
ERASED

A.__init__

Heap Space

y

1

A

id1

Global Space

p

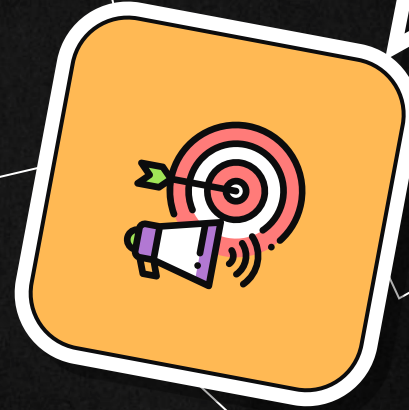
id1

End of Call Frame and
Global Assignment

03

Part C

Diagram the Execution of $q = B(7,3)$



...

About

M

**Folder
Initialization**

B

id2

Call Frame

Global Space

Heap Space

Call to
`B.__init__(self, 7, 3)`

2

self

id2

x

7

y

3

`B.__init__`

Call Frame

Global Space

B

x

7

id2

Heap Space

Nested Call Frame
A.__init__(self, 4)

2

self

id2

x

7

y

3

B.__init__

1

self

id1

y

4

A.__init__

Call Frame

Heap Space

**B.__init__
Call Frame**

2

self

id2

x

y

7

3

B.__init__

Call Frame

1

self

id1

WHOLE FRAME
ERASED

A.__init__

B

x

7

y

4

id2

Heap Space

**B...init...
Call Frame**

2

self

id2

**WHOLE FRAME
ERASED**

3

B...init...

q

id2

Call Frame

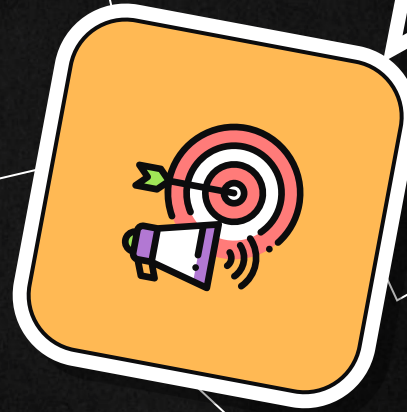
Global Space

Heap Space

03

Part D

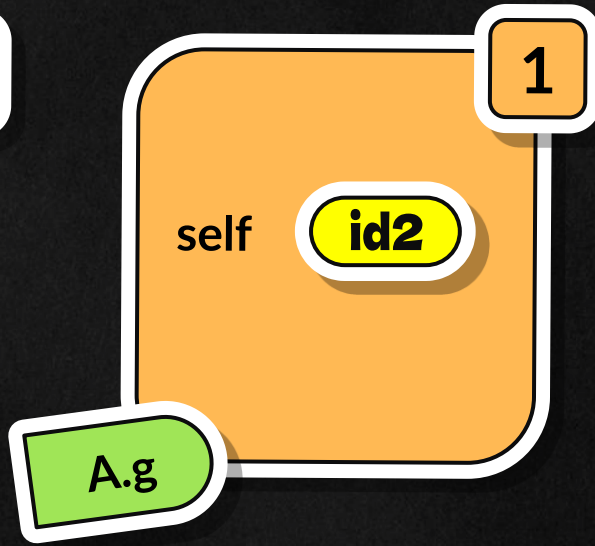
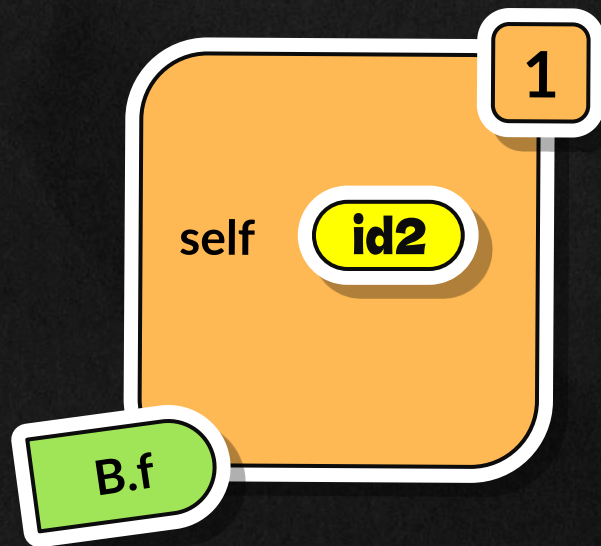
Diagram the Execution of $r = q.f()$



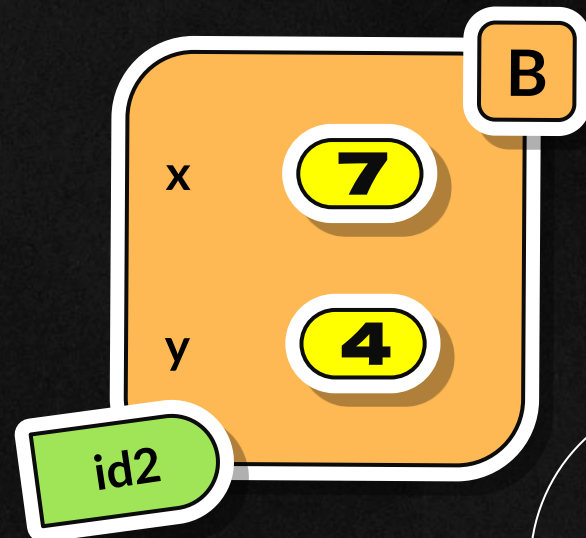
...



**Call to B.f(self)
on q (B₁)**

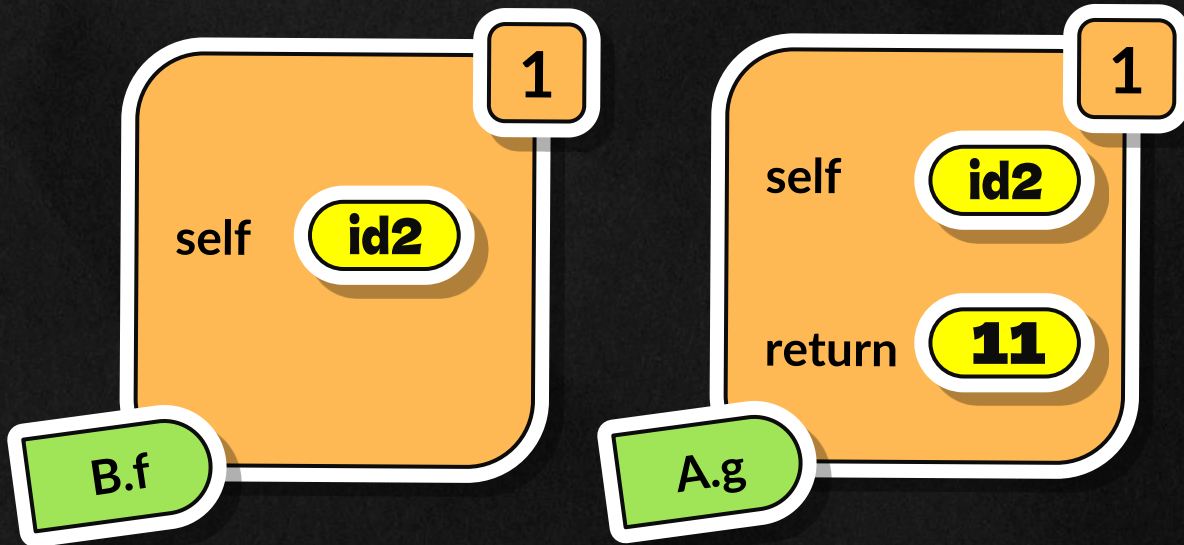


Call Frame



Heap Space

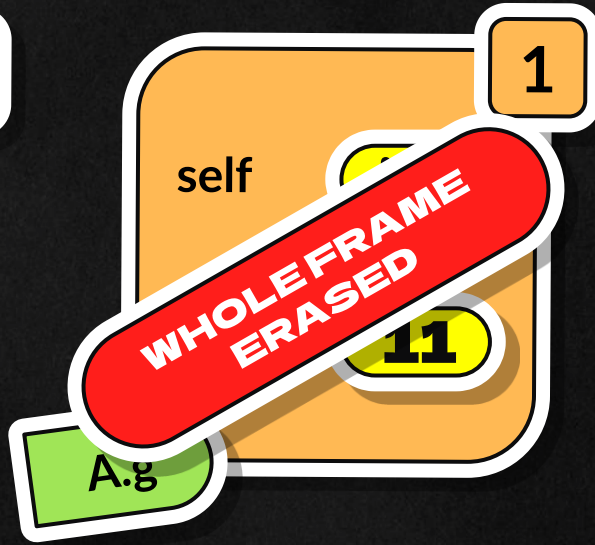
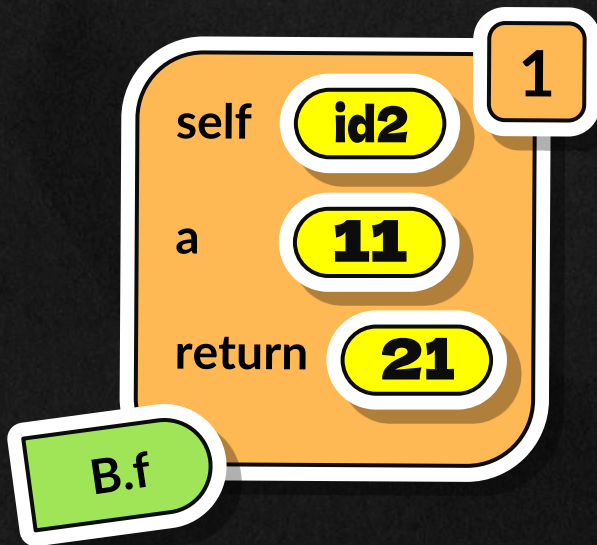
Call to B.f(self)
on q (B₁)



Call Frame

Heap Space

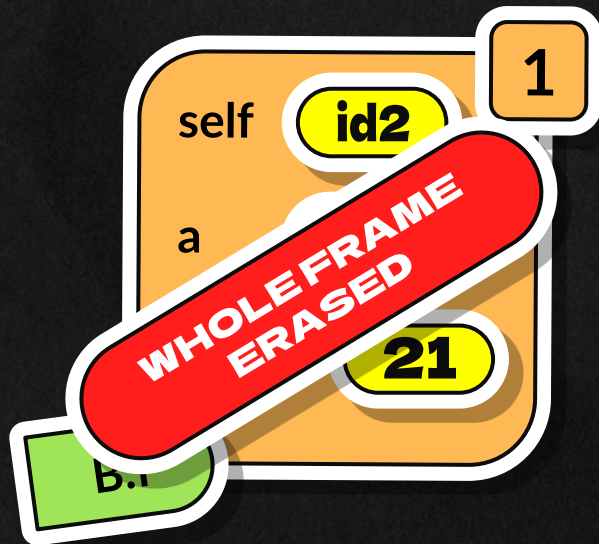
**Call to B.f(self)
on q (B₁)**



Call Frame

Heap Space

**Call to B.f(self)
on q (B₁)**



Call Frame

q

id2

r

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Global Space

Heap Space

Challenges

Thanks for your services!



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