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Code

Open in... Python 3 (ipykernel)

[ ]:
```
set-2
```

[19]:
```
#Calculate the remainder of 1234 divided by 100 without using the % operator.
remainder=1234-(1234//100)*100
print(remainder)
```

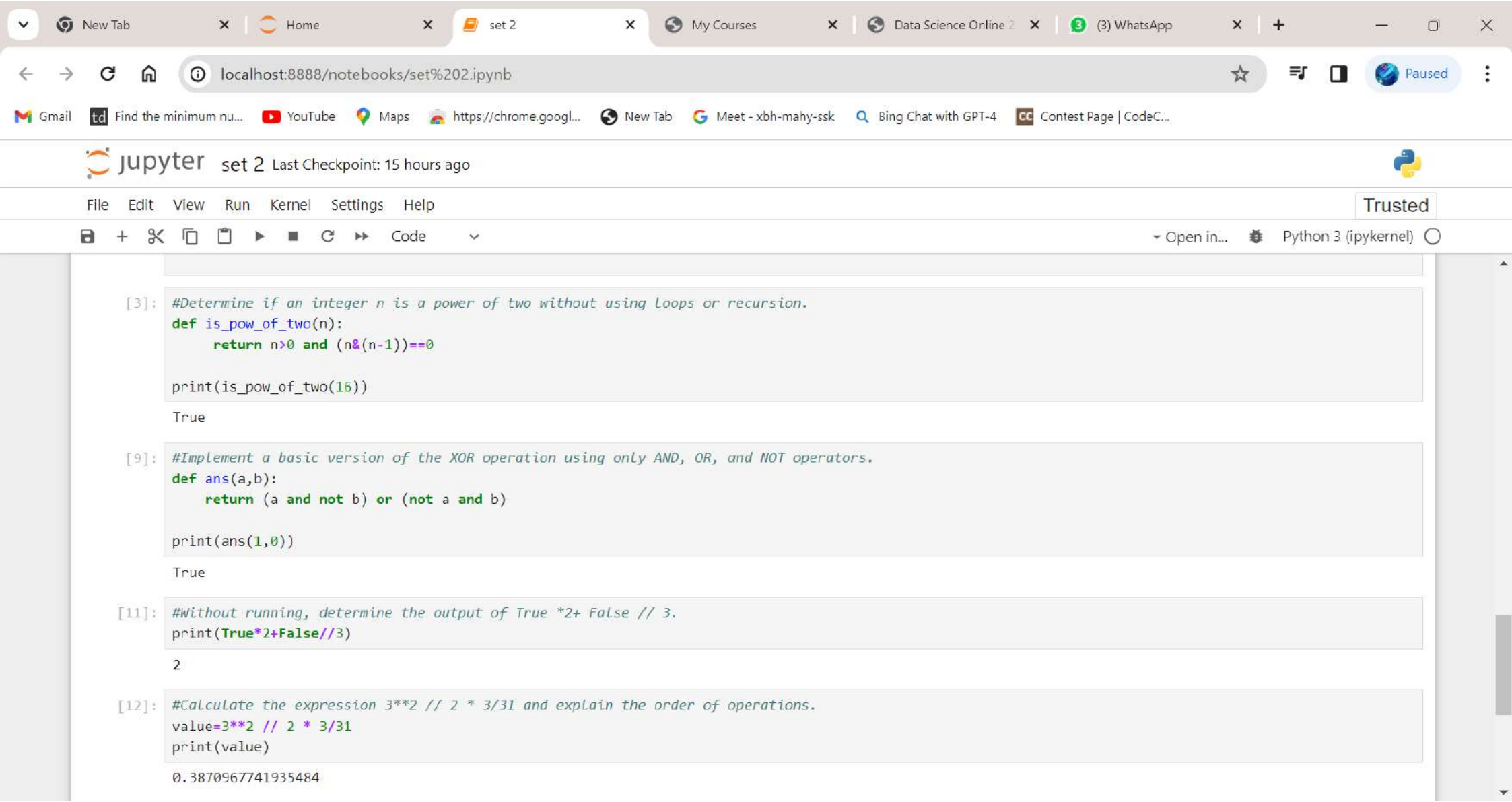
```
34
```

[ ]:
```
#Reverse the bits of an 8-bit binary number, @b11010100.
int(bin(0b11010100)[:1:-1].ljust(8,'0'),2)
```

[ ]:
```
#Check if two numbers, a= 4 and b= 9, have opposite signs using bitwise operators.
(a^b)<0
```

[ ]:
```
#Swap two integers a= 3 and b= 5 without using extra space.
a=a^b
b=a^b
a=a^b
```

[3]:
```
#Determine if an integer n is a power of two without using loops or recursion.
def is_pow_of_two(n):
    return n>0 and (n&(n-1))==0
```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Python 3 (ipykernel)
[3]:
#Determine if an integer n is a power of two without using loops or recursion.
def is_pow_of_two(n):
return n>0 and (n&(n-1))==0
print(is_pow_of_two(16))
True
[9]:
#Implement a basic version of the XOR operation using only AND, OR, and NOT operators.
def ans(a,b):
return (a and not b) or (not a and b)
print(ans(1,0))
True
[11]:
#Without running, determine the output of True *2+ False // 3.
print(True*2+False//3)
2
[12]:
#Calculate the expression 3**2 // 2 * 3/31 and explain the order of operations.
value=3**2 // 2 * 3/31
print(value)
0.3870967741935484

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Code

Open in... Python 3 (ipykernel)

```
print(True*2+False//3)
```

```
2
```

[12]:
```
#Calculate the expression 3**2 // 2 * 3/31 and explain the order of operations.
value=3**2 // 2 * 3/31
print(value)
```

```
0.3870967741935484
```

[13]:
```
#Determine if the expression not (a<b) and not (a>b) is equivalent to a == b for any a and b.
def check_equivalence(a,b):
    return not (a<b) and not (a>b)

print(check_equivalence(4,4))
```

```
True
```

[ ]: