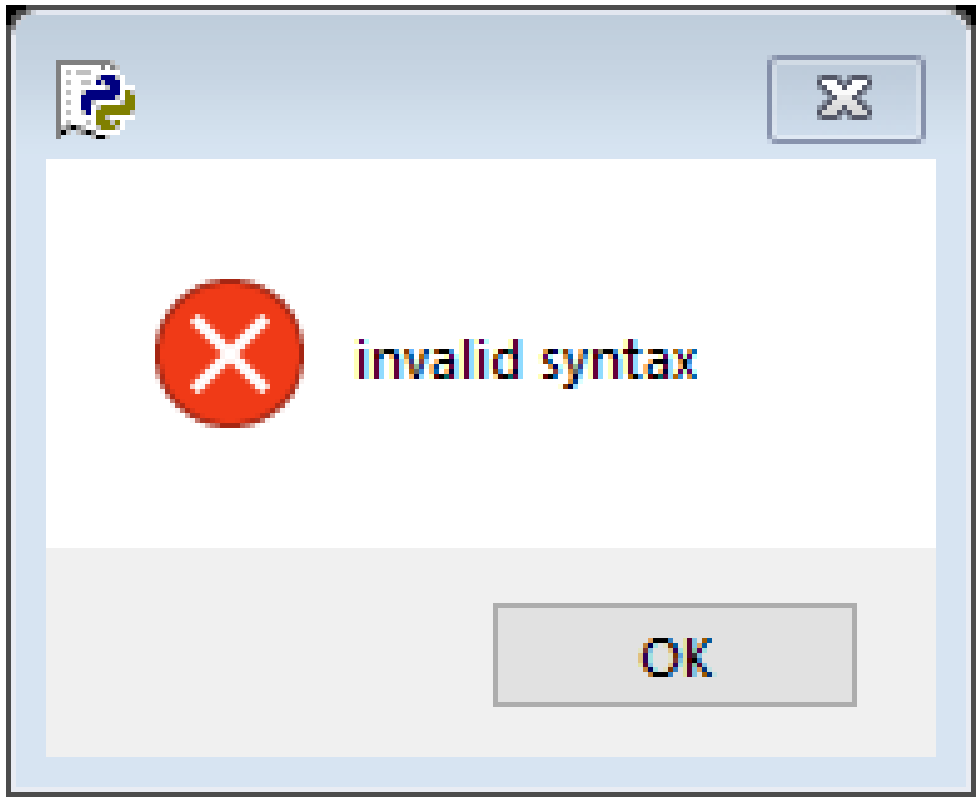
Python

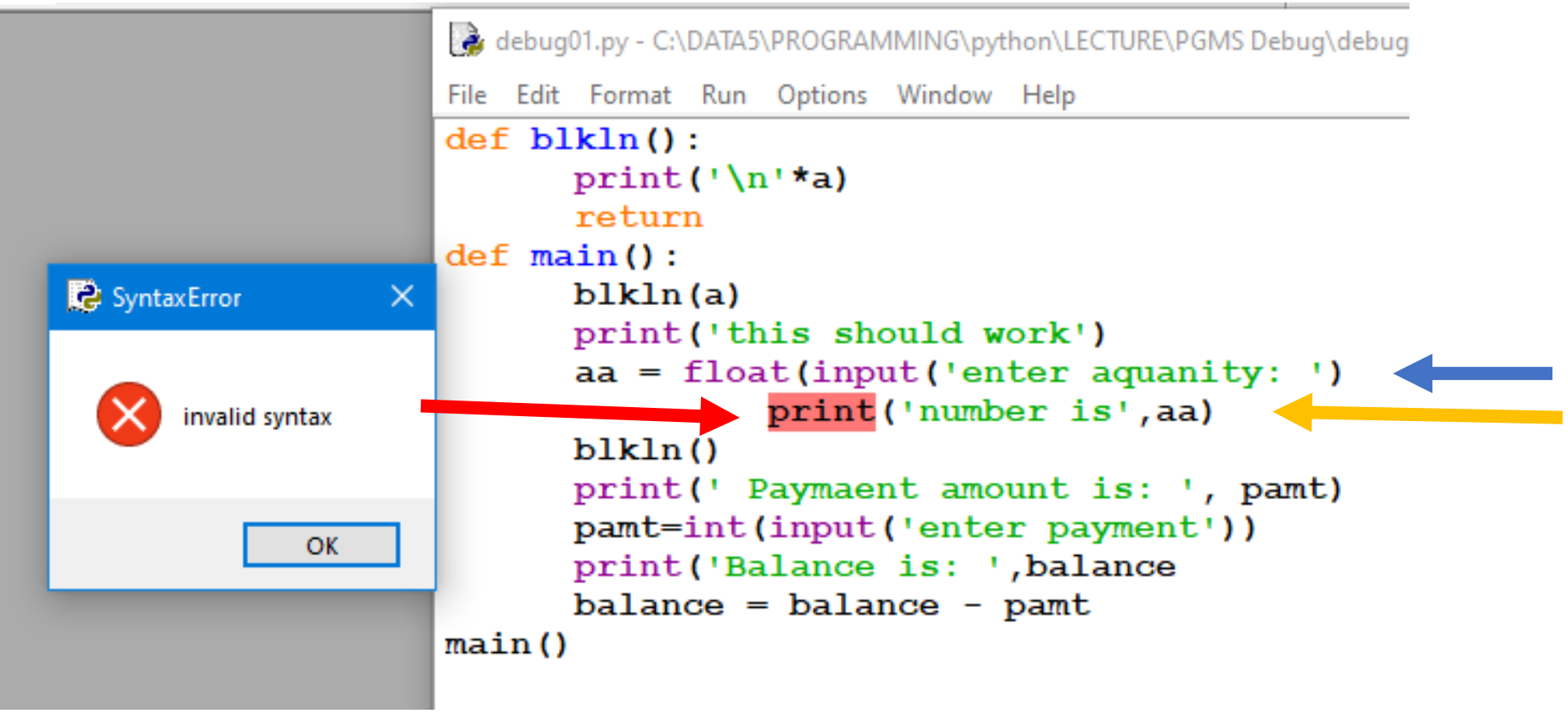
Debugging

Syntax

Syntax message



Where


SyntaxError
invalid syntax
OK
debug01.py - C:\DATA5\PROGRAMMING\python\LECTURE\PGMS Debug\debug
File Edit Format Run Options Window Help
def blkln():
print('\n'*a)
return
def main():
blkln(a)
print('this should work')
aa = float(input('enter aquanity: '))
print('number is',aa)
blkln()
print(' Paymaent amount is: ', pamt)
pamt=int(input('enter payment'))
print('Balance is: ',balance
balance = balance - pamt
main()

Syntax

- Missing pairs
  - ( ) or “” or ‘’
- Undefined items
- Missing colon
- Bad indent

Missing pairs ( ) or “” or ‘’

Examples:

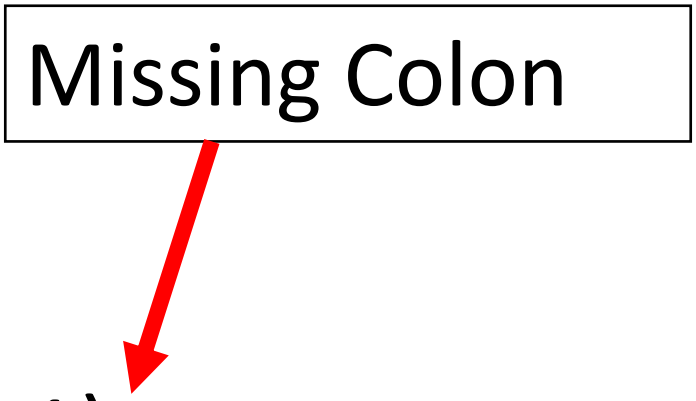
Missing **Parentheses**

thenumb = int(input(‘enternumber)

print(“ the number is’, Numb)

Wrong Quotes

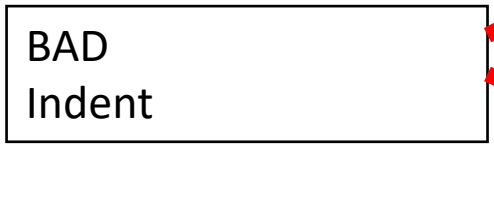
Missing colon




```
for x in range (1,10,1)
    aa = scalc(x)
```

Bad indent

```
X = 1
while x < 25:
  bb = calc(x)
    print('results: ', bb)
   x = x+ 1
print('—done—')
```



Undefined items

```
x = x + 1

print(‘ end of calculation’)
```

Debug This

```
def blkln()
    print('\n*3')
def main():
    print'title is’
    print('- - - - - - - - -')
    blkln()
    print('- - - - - - - - -')
main()
```

DeBug this

```
def blkln(cs):
    print('\n' *a)
def main():
    blkln(60)
    bb = aa * 100 + 50
    aa = float(input('Enter a number: ')
    print(' calculation results is: ', bb)
 main()
```

DeBug this

```
del blkln(a):
    print('\n'*a)
    return
def main():
    blkln(60)
    balance=100.00
    payment=float(input('enter payment: '))
    newbalance = balance - payment
    print('starting balance: ',balance)
    print(' Payment: ',payment)
    print('New Balance: ',newbalance)
    blkln(10)
main()
```

Logic

Missing variables

Misspelled variables

Wrong place

```
def blkln():
    print('\n'*a)
    return
def main():
    blkln(a)
    print('this should work')
    aa = float(input('enter aquanity: ')
        print('number is',aa)
    blkln()
    print(' Paymaent amount is: ', pamt)
    pamt=int(input('enter payment'))
    print('Balance is: ',balance
    balance = balance - pamt
main()
```

Try this

```
def blkln(a):
    print('\n'*a)
    return
def main():
    blkln(10)
    balance=100.00
    payment=float(input('enter payment: '))
    blkln(10)
    newbalance = balance - paymnet
    print('starting balance: ',balacne)
    print(' Payment: ',payment)
    print('New Balance: ',newbalnace)
    blkln(10)
main()
```

Try this

debug02

Calculations

Be careful with formulas and calculations

```
def blkln(a):
    print('\n'*a)
    return
def sepln(a):
    print('-'*a)
    return
def main():
    Cel = 0.0
    blkln(60)
    fah = float(input('Enter Fahrenheit: '))
    sepln(20)
    cel = (fah - 32) * 5/9
```

Try this pt 1:

```
 print('Celsius: ',cel)
     sepln(20)
     cel = fah - 32 * 5/9
     print('Celsius: ',cel)
     sepln(20)
     cel = (fah - 32 * 5)/9
     print('Celsius: ',cel)
     sepln(20)
     blkln(5)
     return
main()
```

Try this pt 2:

TESTING

Types of testing

Sunshine

Any data

Test with errors

Sunshine

Test program using data where you know the answer

The data is perfect (error free)

Try This

```
def main():
    n1 = 0
    n2 = 0
    n1 = input("Enter number 1: ")
    n2 = input('Enter number 2: ')
    n3 = n1 + n2
    print(n1, ' + ', n2, ' = ', n3)
    return
main()
```

debug04

Testing with data

Test programs with all kinds of data.

Testing with error data

Do not expect the user to enter perfect data every time

Try This

```
def main():
    n1 = 0
    n2 = 0
    n1 = input("Enter number 1: ")
    n2 = input('Enter number 2: ')
    n1 = int(n1)
    n2 = int(n2)
    n3 = n1 + n2
    print(n1, ' + ', n2, ' = ', n3)
    return
main()
```

debug05

Try This

```
def main():
    n1 = 0
    n2 = 0
    n1 = input("Enter number 1: ")
    n2 = input('Enter number 2: ')
    n1 = int(n1)
    n2 = int(n1)
    n3 = n1 + n2
    print(n1, ' + ', n2, ' = ', n3)
    return
main()
```

debug06

Done