[1]:
```
print ("123")
```

```
123
```

[2]:
```
print ("Hello World")
```

```
Hello World
```

[3]:
```
print ("x=12.2")
print ("y=14")
```

```
x=12.2
y=14
```

[4]:
```
print ("x=12.2")
print ("y=14")
print ("x=100")
```

```
x=12.2
y=14
x=100
```

[5]:
```
xlq3z9ocd = 35.0
xlq3z9afd = 12.50
xlq3p9afd = xlq3z9ocd * xlq3z9afd
print(xlq3p9afd)
```

```
437.5
```

[6]:
```
a=35.0
b=12.50
c=a*b
print(c)
```

```
437.5
```

[7]:
```
hours=35.0
rate=12.50
pay=hours*rate
print(pay)
```

```
437.5
```

[8]:
```
xx = 2
xx = xx + 2
print(xx)
```

```
4
```

[9]:
```
yy = 440*12
print(yy)
```

```
5280
```

[10]:
```
zz = yy/1000
print(zz)
```

```
5.28
```

[11]:
```
jj=23
kk=jj%5
print(kk)
```

```
3
```

[12]:
```
print(4**3)
```

```
64
```

[13]:
```
x=1+2 ** 3/4 * 5
print(x)
```

```
11.0
```

[14]:
```
ddd=1+4
print(ddd)
```

```
5
```

[15]:
```
eee='hello' + 'there'
print(eee)
```

```
hellothere
```

[16]:
```
type(eee)
```

[16]:
```
str
```

[17]:
```
type('hello')
```

[17]:
```
str
```

[18]:
```
type('1')
```

[18]:
```
str
```

[19]:
```
xx=1
type(xx)
```

[19]:
```
int
```

[20]:
```
temp=98.6
type(temp)
```

[20]:
```
float
```

[21]:
```
type(1)
```

[21]:
```
int
```

[22]:
```
type(1.0)
```

[22]:
```
float
```

[23]:
```
type(1)
```

[23]:
```
int
```

[24]:
```
i=42
type(i)
```

[24]:
```
int
```

[25]:
```
f=float(i)
print(f)
```

```
42.0
```

[26]:
```
type(f)
```

[26]:
```
float
```

[27]:
```
print (10/2)
```

```
5.0
```

[28]:
```
print (9/2)
```

```
4.5
```

[29]:
```
print (99/100)
```

```
0.99
```

[30]:
```
print (10.0/2.0)
```

```
5.0
```

[31]:
```
print (99.0/100.0)
```

```
0.99
```

[32]:
```
sval='123'
type(sval)
print('sval+1')
```

```
sval+1
```

[33]:
```
ival=int(sval)
type(ival)
```

[33]:
```
int
```

[34]:
```
ival=int(sval)
type(ival)
print("ival +1")
```

```
ival +1
```

[35]:
```
nsv = 'hello bob'
niv = nsv
print(niv)
```

```
hello bob
```

[36]:
```
nam=input('Who are you')
print ('Welcome' , nam)
```

```
Who are you 0
Welcome 0
```

[37]:
```
inp=input ('Europe floor?')
usf=int(inp) + 1
print ('US floor' , usf)
```

```
Europe floor? 0
US floor 1
```

[38]:
```
hours=35
rate=2.75
pay=hours*rate
print(pay)
```

```
96.25
```

[39]:
```
x=5
if x<10:
    print ('smaller')
if x>10:
    print ('bigger')
print('finis')
```

```
smaller
finis
```

[40]:
```
x=5
if x==5:
    print('Equals 5')
if x>4:
    print('Greater than 4')
if x>=5:
    print('Greater than or Equals 5')
if x<6:
    print('less than 6')
if x<=5:
    print('less than or Equals 5')
if x!=6:
    print('Not equal 6')
```

```
Equals 5
Greater than 4
Greater than or Equals 5
less than 6
less than or Equals 5
Not equal 6
```

[41]:
```
x=5
print ('Before 5')
if x==5:
    print('Is 5')
    print('Is still 5')
    print('Third 5')
print('Afterwards 5')
print('Before 6')
if x==6:
     print('Is 6')
     print('Is still 6')
     print('Third 6')
print('Afterwards 6')
```

```
Before 5
Is 5
Is still 5
Third 5
Afterwards 5
Before 6
Afterwards 6
```

[42]:

```
x = 5
if x > 2:
    print('Bigger than 2')
print('Still Bigger')
print('Done with 2')

for i in range(5):
    print(i)
    if i > 2:
        print('Bigger than 2')
print('Done with 2')
print('Done with i:', i)
print('All Done')
```

```
Bigger than 2
Still Bigger
Done with 2
0
1
2
3
Bigger than 2
4
Bigger than 2
Done with 2
Done with i: 4
All Done
```

[43]:
```
x=42
if x>1:
    print ('More than one')
    if x<100:
        print ('Less than one')
print ('All Done')
```

```
More than one
Less than one
All Done
```

[44]:
```
x=4
if x>2:
    print ('Bigger')
else:
     print ('smaller')
print ('All Done')
```

```
Bigger
All Done
```

[45]:
```
if x>2:
    print ('small')
elif x<10:
     print ('medium')
else:
    print('Large')
print ('All Done')
```

```
small
All Done
```

[46]:
```
x=0
if x>2:
    print ('small')
elif x<10:
     print ('medium')
else:
    print('Large')
print ('All Done')
```

```
medium
All Done
```

[47]:
```
x=5
if x<2:
    print ('small')
elif x<10:
     print ('medium')
else:
    print('Large')
print ('All Done')
```

```
medium
All Done
```

[48]:
```
x=20
if x<2:
    print ('small')
elif x<10:
     print ('medium')
else:
    print('Large')
print ('All Done')
```

```
Large
All Done
```

[49]:
```
x=5
if x<2:
    print ('small')
elif x<10:
     print ('medium')
print ('All Done')
```

```
medium
All Done
```

[50]:
```
if x<2:
    print ('small')
elif x<10:
     print ('medium')
elif x<20:
     print ('Big')
elif x<40:
     print ('large')
elif x<100:
     print ('Huge')
else:
    print('Ginormous')
```

```
medium
```

[51]:
```
if x<2:
    print ('Below 2')
elif x>=2:
     print ('Two or more')
else:
    print('Something else')
```

```
Two or more
```

[52]:
```
if x<2:
    print ('Below 2')
elif x<2:
     print ('Below 20')
elif x<10:
    print ('Below 10')
else:
    print('Something else')
```

```
Below 10
```

[53]:
```
astr = 'Hello Bob'
try:
    istr = int(astr)
    print('First:', istr)
except ValueError:
    print("Error: Cannot convert 'Hello Bob' to integer.")
```

```
Error: Cannot convert 'Hello Bob' to integer.
```

[54]:
```
astr = '123'
istr = int(astr)
print('Second:', istr)
```

```
Second: 123
```

[55]:
```
astr = 'Hello Bob'
try:
    istr = int(astr)
except:
    istr = -1
print('First:', istr)

astr = '123'
try:
    istr = int(astr)
except:
    istr = -1
print('Second:', istr)
```

```
First: -1
Second: 123
```

[56]:
```
astr = 'Bob'
try:
    print('hello')
    istr=int(astr)
    print('There')
except:
    istr = -1
print('Done' , istr)
```

```
hello
Done -1
```

[57]:
```
rawstr=input('Enter a number:')
try:
    ival = int(rawstr)
except:
    ival = -1
if ival>0:
    print('Nice work')
else:
    print('Not a number')
```

```
Enter a number: 0
Not a number
```

[58]:
```
# Get user input
hours = float(input("Enter Hours: "))
rate = float(input("Enter Rate: "))

# Calculate pay
if hours <= 40:
    pay = hours * rate
else:
    pay = (40 * rate) + ((hours - 40) * rate * 1.5)

# Print result
print("Pay: ", pay)
```

```
Enter Hours:  45
Enter Rate:  10
Pay:  475.0
```

[60]:
```python
def calculate_pay(hours, rate):
    if hours <= 40:
        return hours * rate
    else:
        return (40 * rate) + ((hours - 40) * rate * 1.5)

def get_numeric_input(prompt):
    while True:
        try:
            return float(input(prompt))
        except ValueError:
            print("Invalid input. Please enter a number.")

def main():
    hours = get_numeric_input("Enter Hours: ")
    rate = get_numeric_input("Enter Rate: ")

    pay = calculate_pay(hours, rate)
    print("Pay: ", pay)

if __name__ == "__main__":
    main()
```

```
Enter Hours:  20
Enter Rate:  nine
Invalid input. Please enter a number.
Enter Rate:  9
Pay:  180.0
```

[62]:
```
def thing():
    print('Hello')
thing()
print('Fun')
```

```
Hello
Fun
```

[63]:
```
def thing():
    print('zip')
thing()
```

```
zip
```

[64]:
```
big=max('Hello world')
print(big)
```

```
w
```

[66]:
```
def max(inp):
    blah
    blah
    for x in inp:
        blah
        blah
print(x)
```

```
5
```

[67]:
```
print(float(99) / 100)
```

```
0.99
```

[68]:
```
i=42
type(i)
```

[68]:
```
int
```

[69]:
```
f=float(i)
print(f)
```

```
42.0
```

[70]:
```
print(1 + 2 * float(3) / 4 - 5)
```

```
-2.5
```

[71]:
```
type(f)
```

[71]:
```
float
```

[72]:
```
sval = '123'
type (sval)
```

[72]:
```
str
```

```
sval = ('123')
print(int(sval) + 1)
```

```
124
```

```
sval = ('123')
print(sval + str(1))
```

```
1231
```

```
ival=int(sval)
type(ival)
```

```
int
```

```
name = "Bob"
print(f"Hello, {name}")
```

```
def print_lyrics():
    lyrics = """
    I am a lumberjack, and I am okay.
    I sleep all night, and I work all day.
    """
    print(lyrics)

print_lyrics()
```

[6]:
```
x=5
print('Hello')
```

```
Hello
```

[7]:
```
print('Yo')
x=x+2
print(x)
```

```
Yo
7
```

[8]:
```
def print_lyrics():
    print("I am a lumberjack, and I am okay.")
    print("I sleep all night, and I work all day.")

# Call the function
print_lyrics()
```

```
I am a lumberjack, and I am okay.
I sleep all night, and I work all day.
```

[9]:
```
def greet(lang):
    if lang=='es':
        print('Hola')
    elif lang=='fr':
        print('Bonjour')
    else:
         print('Hello')
```

10]:
```
def greet(lang, name=''):
    greetings = {
        'es': 'Hola',
        'fr': 'Bonjour'
    }
    base_greeting = greetings.get(lang, 'Hello')
    if name:
        return f"{base_greeting} {name}!"
    return base_greeting

print(greet('es', 'Juan'))  # Output: Hola Juan!
print(greet('fr', 'Pierre'))  # Output: Bonjour Pierre!
```

```
Hola Juan!
Bonjour Pierre!
```

11]:
```
greet('en')
```

11]:
```
'Hello'
```

[11]:
```
greet('en')
```

[11]:
```
'Hello'
```

[12]:
```
greet('es')
```

[12]:
```
'Hola'
```

[13]:
```
greet('fr')
```

[13]:
```
'Bonjour'
```

[14]:
```
def greet():
    return "Hello"
print(greet(),"Gleen")
print(greet(),"Sally")
```

```
Hello Gleen
Hello Sally
```

[15]:
```python
def greet(lang, name=''):
    greetings = {
        'es': 'Hola',
        'fr': 'Bonjour'
    }
    base_greeting = greetings.get(lang, 'Hello')
    if name:
        return f"{base_greeting} {name}!"
    return base_greeting

print(greet('es', 'Juan'))  # Output: Hola Juan!
print(greet('fr', 'Pierre'))  # Output: Bonjour Pierre!
```

```
Hola Juan!
Bonjour Pierre!
```

[16]:
```python
print(greet('en'),'Glenn')
```

```
Hello Glenn
```

[17]:
```python
print(greet('es'),'Sally')
```

```
Hola Sally
```

```
print(greet('fr'),'Michael')
```

```
Bonjour Michael
```

```
def addtwo(a, b):
    added = a + b
    return added

x = addtwo(3, 5)
print(x)
```

```
8
```

```
def addtwo(a: int, b: int) -> int:
    """Return the sum of two integers."""
    return sum([a, b])

x = addtwo(3, 5)
print(x)
```

```python
# Test the function
hours_worked = 50
hourly_rate = 20

total_pay = computePay(hours_worked, hourly_rate)
print(f"Total pay for {hours_worked} hours at ${hourly_rate}/hr: ${total_pay:.2f}")
```

```
Total pay for 50 hours at $20/hr: $1100.00
```

[3]:
```
print('Before')
for thing in [9 , 41 , 12 , 3, 74 , 15]:
    print(thing)
print('After')
```

```
Before
9
41
12
3
74
15
After
```

[4]:
```
for i in [5,4,3,2,1]:
    print(i)
print('Blastoff!')
```

```
5
4
3
2
1
Blastoff!
```

[10]:
```
found = False
print('Before', found)
for value in [9, 41, 12, 3, 74, 15]:
    if value == 3:
        found = True
        print('Found', value)
    # You can add a break statement here to stop the loop once the value is found
print('After', found)
```

```
Before False
Found 3
After True
```

[11]:
```
largest_so_far = -1
print('Before' , largest_so_far)
for the_num in [9 , 41 , 12 , 3, 74 , 15]:
    if the_num>largest_so_far:
        largest_so_far=the_num
    print(largest_so_far , the_num)
print('After' , largest_so_far)
```

```
Before -1
9 9
41 41
41 12
41 3
74 74
74 15
After 74
```

[12]:

```
smallest_so_far = -1
print('Before' , smallest_so_far)
for the_num in [9 , 41 , 12 , 3, 74 , 15]:
    if the_num<smallest_so_far:
        smallest_so_far=the_num
    print(smallest_so_far , the_num)
print('After' , smallest_so_far)
```

```
Before -1
-1 9
-1 41
-1 12
-1 3
-1 74
-1 15
After -1
```

[13]:

```
smallest=None
print('Before')
for value in [9 , 41 , 12 , 3, 74 , 15]:
    if smallest is None:
        smallest=value
    elif value<smallest:
        smallest=value
    print('smallest' , value)
print('After' , smallest)
```

```
Before
smallest 9
smallest 41
smallest 12
smallest 3
smallest 74
smallest 15
After 3
```