INFO-5717-Assignment-one-code

In [1]:
```
message='And now for something completely different'
print(message)
```
```
And now for something completely different
```

Question 1 (The program for question 1 blew)

In [ ]:
```
# The code for Question 1-(1)
n= 17
pi= 3.1415926535897932

76trombones = 'big parade'
more@ = 1000000
class = 'Advanced Theoretical Zymurgy'

42
n
n+25

n=17
print(n)

miles=26.2
miles*1.61

x=5
x+1

2*(3-1)
(1+1)*(5-2)

minute=60
(minute*100)/60

n=17
n+25

first='throat'
second='warbler'
first+second=

int('32')
int('Hello')
int(3.99999)
int(-2.3)
float(32)
float('3.1415926535897932')

str(32)
str(3.1415926535897932)

import math
<module'math'>
ratio= signal_power/noise_power
decibels=10*math.log10(ratio)
radians=0.7
height=math.sin(radians)

degree=45
radians=degree/180.0*math.pi
height=math.sin(radians)
math.sqrt(2)/2.0

print(print_lyrics)
type(print_lyrics)

def repeat_lyrics()
def print_twice(bruce)

print_twice('spam')
print_twice(42)

print_twice(math.pi)
print_twice('spam'*4)
print_twice(math.cos(math.pi))

Michael='Eric, the half a bee.'
print_twice(Michael)

line 1='Bing tiddle'
line 2='tiddle Bang'
cat_twice(line1.line2)

x= math.cos(radians)
golden=(math.sqrt(5)+1)/2
math.sqrt(5)=

result=print_twice('Bing')
print(result)
type(None)

minutes=105
minute/60

minute=105
hours=minutes//60
hours

reminder=minutes-hours*60
reminder

5==5
5==6

type bool=[not string]
type(True)
type(False)


def countdown(n):
if n<=0
   print('Blastoff!')
   else:
       print(n)
       countdown(n-1)

name=input('what ...is your name?\n')
what ...is your name?
Arthur,King of the Britons!
name

int prompt='what...is the airspeed velocity of an unladen swallow?\n'
speed=input(prompt)
what...is the airspeed velocity of an unladen swallow?
int(speed)

x=5
y=6
file"<stdin>",line 1
y=6

def absolute_value(x)
if x<0:
    return-x
else: return x.
print (absolute_value(0))

def distance(x1,y1,x2,y2)
dx= x2-x1
dy= y2-y1
print('dx is', dx)
print('dy is',dy)
return
dx=3
dy=4
next, def distance(x1,y1,x2,y2)
dx=x2-x1
dy=y2-y1
dsquared= dx**2+ dy**2
print('dsquared is:', dsquared)
return

def
is_divisible(x, y):
    if x % y == 0:
        return True
    else:
        return False
is_divisible(6,4)
is_divisible(6,3)

x=5
x

x=7
x

a=5
b=a
a=3
b

x=0
x=x+1

a=4
x=3
y=(x+a/x)/2
y=....
```

Question 1.2

In [80]:
```
76trombones = 'big parade'
```
```
  File "<ipython-input-80-ee59a172c534>", line 1
    76trombones = 'big parade'
              ^
SyntaxError: invalid syntax
```

In [81]:
```
more@ = 1000000
```
```
---------------------------------------------------------------------------
FileNotFoundError                         Traceback (most recent call last)
<ipython-input-81-874d58278958> in <module>
----> 1 get_ipython().run_line_magic('more', '@ = 1000000')

//anaconda3/lib/python3.7/site-packages/IPython/core/interactiveshell.py in run_line_magic(self, magic_name, line, _stack_depth)
   2311                 kwargs['local_ns'] = sys._getframe(stack_depth).f_locals
   2312             with self.builtin_trap:
-> 2313                 result = fn(*args, **kwargs)
   2314             return result
   2315 

</anaconda3/lib/python3.7/site-packages/decorator.py:decorator-gen-118> in less(self, arg_s)

//anaconda3/lib/python3.7/site-packages/IPython/core/magic.py in <lambda>(f, *a, **k)
    185     # but it's overkill for just that one bit of state.
    186     def magic_deco(arg):
--> 187         call = lambda f, *a, **k: f(*a, **k)
    188 
    189         if callable(arg):

//anaconda3/lib/python3.7/site-packages/ipykernel/zmqshell.py in less(self, arg_s)
    340             cont = self.shell.pycolorize(openpy.read_py_file(arg_s, skip_encoding_cookie=False))
    341         else:
--> 342             cont = open(arg_s).read()
    343         page.page(cont)
    344 

FileNotFoundError: [Errno 2] No such file or directory: '@ = 1000000'
```

In [82]:
```
class = 'Advanced Theoretical Zymurgy'
```
```
  File "<ipython-input-82-73fc4ce1a15a>", line 1
    class = 'Advanced Theoretical Zymurgy'
          ^
SyntaxError: invalid syntax
```

In [83]:
```
42
```
Out[83]: 42

In [84]:
```
n
n+25
```
Out[84]: 42

In [85]:
```
n=17
print(n)
```
```
17
```

In [2]:
```
miles=26.2
miles*1.61
```
Out[2]: 42.182

In [3]:
```
x=5
x+1
```
Out[3]: 6

In [4]:
```
n=17
n+25
```
Out[4]: 42

In [5]:
```
2*(3-1)
```
Out[5]: 4

In [6]:
```
minute= 60
(minute*100)/60
```
Out[6]: 100.0

In [7]:
```
(1+1)*(5-2)
```
Out[7]: 6

In [8]:
```
first='throat'
second='warbler'
first+second
```
Out[8]: 'throatwarbler'

In [9]:
```
int('32')
```
Out[9]: 32

In [10]:
```
int('Hello')
int()
```
```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
<ipython-input-10-e8410cfe3f67> in <module>
----> 1 int('Hello')
      2 int()

ValueError: invalid literal for int() with base 10: 'Hello'
```

In [11]:
```
int(3.99999)
```
Out[11]: 3

In [12]:
```
int(-2.3)
```
Out[12]: -2

In [13]:
```
float(32)
```
Out[13]: 32.0

In [14]:
```
float('3.1415926535897932')
```
Out[14]: 3.141592653589793

In [15]:
```
str(32)
```
Out[15]: '32'

In [16]:
```
str(3.1415926535897932)
```
Out[16]: '3.141592653589793'

In [17]:
```
import math
ratio = signal_power / noise_power
decibels = 10 * math.log10(ratio)
radians = 0.7
height = math.sin(radians)
```
```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-17-ec021ae3f76f> in <module>
      1 import math
----> 2 ratio = signal_power / noise_power
      3 decibels = 10 * math.log10(ratio)
      4 radians = 0.7
      5 height = math.sin(radians)

NameError: name 'signal_power' is not defined
```

In [18]:
```
degree=45
radians=degree/180.0*math.pi
math.sin(radians)
```
Out[18]: 0.7071067811865475

In [19]:
```
math.sqrt(2)/2.0
```
Out[19]: 0.7071067811865476

In [20]:
```
def print_lyrics():
    print("I'm a lumberjack, and I'm okay.")
    print("I sleep all night and I work all day.")

def repeat_lyrics():
    print_lyrics()
    print_lyrics()
repeat_lyrics()
```
```
I'm a lumberjack, and I'm okay.
I sleep all night and I work all day.
I'm a lumberjack, and I'm okay.
I sleep all night and I work all day.
```

In [50]:
```
def print_twice(bruce):
    print(bruce,bruce)
```

In [51]:
```
print_twice("Spam")
```
```
Spam Spam
```

In [52]:
```
print_twice(42)
```
```
42 42
```

In [53]:
```
print_twice(math.pi)
```
```
3.141592653589793 3.141592653589793
```

In [54]:
```
print_twice('Spam '*4)
```
```
Spam Spam Spam Spam  Spam Spam Spam Spam
```

In [55]:
```
print_twice(math.cos(math.pi))
```
```
-1.0 -1.0
```

In [56]:
```
michael = 'Eric, the half a bee.'
print_twice(michael)
```
```
Eric, the half a bee. Eric, the half a bee.
```

In [57]:
```
def cat_twice(part1, part2):
    cat = part1 + part2
    print_twice(cat)
```

In [58]:
```
line1 = 'Bing tiddle '
line2 = 'tiddle bang.'
cat_twice(line1, line2)
```
```
Bing tiddle tiddle bang. Bing tiddle tiddle bang.
```

In [59]:
```
print('cat')
print()
```
```
cat
```

In [60]:
```
x = math.cos(radians)
golden = (math.sqrt(5) + 1) / 2
math.sqrt(5)
```
Out[60]: 2.23606797749979

In [61]:
```
result = print_twice('Bing')
```
```
Bing Bing
```

In [62]:
```
print(result)
type(None)
```
```
None
```
Out[62]: NoneType

In [63]:
```
import turtle bob = turtle.Turtle()
print(bob)
turtle.mainloop()
```
```
  File "<ipython-input-63-da4041e1ee7c>", line 1
    import turtle bob = turtle.Turtle()
                    ^
SyntaxError: invalid syntax
```

In [64]:
```
minutes = 105
minutes / 60
```
Out[64]: 1.75

In [65]:
```
minutes = 105
hours = minutes // 60
hours
```
Out[65]: 1

In [66]:
```
remainder = minutes - hours * 60
remainder
```
Out[66]: 45

In [67]:
```
5 == 5
```
Out[67]: True

In [68]:
```
5 == 6
```
Out[68]: False

In [69]:
```
type(True)
```
Out[69]: bool

In [70]:
```
type(False)
```
Out[70]: bool

In [71]:
```
42 and True
```
Out[71]: True

In [72]:
```
x > 0
print('x is positive')
```
```
x is positive
```

In [73]:
```
x < 0
```
Out[73]: False

In [74]:
```
if x % 2 == 0:
    print('x is even')
else:
    print('x is odd')
```
```
x is odd
```

In [75]:
```
if 0 < x < 10:
    print('x is a positive single-digit number.')
```
```
x is a positive single-digit number.
```

In [ ]:
```
text = input()
What are you waiting for?
print("text")
```

In [ ]:
```
name = input('what ...is your name?\n')
print(name)
```

In [29]:
```
prompt = ('What...is the airspeed velocity of an unladen swallow?\n')
 speed = input(prompt)
What...is the airspeed velocity of an unladen swallow?
42
print int(speed)
```
```
  File "<ipython-input-29-6bb420570296>", line 2
    speed = input(prompt)
    ^
IndentationError: unexpected indent
```

In [28]:
```
def is_divisible(x, y):
    if x % y == 0:
        return True
    else:
        return False
```

In [27]:
```
is_divisible(6, 4)
```
```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-27-925f436a63dd> in <module>
----> 1 is_divisible(6, 4)

NameError: name 'is_divisible' is not defined
```

In [26]:
```
is_divisible(6, 3)
```
```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-26-f7b3cb77de3b> in <module>
----> 1 is_divisible(6, 3)

NameError: name 'is_divisible' is not defined
```

In [25]:
```
factorial(1.5)
```
```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-25-76683e6cb948> in <module>
----> 1 factorial(1.5)

NameError: name 'factorial' is not defined
```

In [24]:
```
print(factorial('fred'))
```
```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-24-7b1bb6463a1c> in <module>
----> 1 print(factorial('fred'))

NameError: name 'factorial' is not defined
```

In [23]:
```
print(factorial(-2))
```
```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-23-939cd69b8edb> in <module>
----> 1 print(factorial(-2))

NameError: name 'factorial' is not defined
```

In [22]:
```
a=5
b=a
a=3
b
```
Out[22]: 5

In [21]:
```
x=0
x=x+1
x()
```
```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-21-1537f5ecd1ec> in <module>
      1 x=0
      2 x=x+1
----> 3 x()

TypeError: 'int' object is not callable
```

In [20]:
```
a=4
x=3
y=(x+a/x)/2
y
```
Out[20]: 2.1666666666666665

Question (2)

In [19]:
```
"A".isupper()
```
Out[19]: True

In [18]:
```
print"This is my Python class"
```
```
  File "<ipython-input-18-7a920a2c34e1>", line 1
    print"This is my Python class"
                                 ^
SyntaxError: invalid syntax
```

In [17]:
```
x == 1 AND y > x
```
```
  File "<ipython-input-17-e53824db5904>", line 1
    x == 1 AND y > x
             ^
SyntaxError: invalid syntax
```

In [16]:
```
return t[1:]
```
```
  File "<ipython-input-16-a97668058b27>", line 1
    return t[1:]
    ^
SyntaxError: 'return' outside function
```

In [15]:
```
if "fruit" in "apple":
```
```
  File "<ipython-input-15-2538f8786a40>", line 1
    if "fruit" in "apple":
                          ^
SyntaxError: unexpected EOF while parsing
```

In [14]:
```
with open("myfile.txt","r")as
f:text=f.read().decode("UTF-8")
```
```
  File "<ipython-input-14-02c2979d1005>", line 1
    with open("myfile.txt","r")as
                                 ^
SyntaxError: invalid syntax
```

In [13]:
```
foo=None
```

In [12]:
```
name="My name is Brenda"
name[0]="A"
```
```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-12-92aa6245d09e> in <module>
      1 name="My name is Brenda"
----> 2 name[0]="A"

TypeError: 'str' object does not support item assignment
```

In [11]:
```
x=3
x**3
```
Out[11]: 27

In [10]:
```
20%7
```
Out[10]: 6

Question 3

In [1]:
```
import random
#generate 12 random numbers between 1 and 100
randomlist= random.sample(range(1,100),12)
print(randomlist)
```
```
[51, 68, 64, 73, 56, 59, 66, 82, 8, 91, 76, 55]
```

In [5]:
```
a=[51, 68, 64, 73, 56, 59, 66, 82, 8, 91, 76, 55]
a.sort()
print("Ascending order is", a)

a.sort(reverse=True)
print("Descending order is",a)
```
```
Ascending order is [8, 51, 55, 56, 59, 64, 66, 68, 73, 76, 82, 91]
Descending order is [91, 82, 76, 73, 68, 66, 64, 59, 56, 55, 51, 8]
```

In [8]:
```
sum([8, 51, 55, 56, 59, 64, 66, 68, 73, 76, 82, 91])
#sum values in a list
```
Out[8]: 749

In [9]:
```
749/12
```
Out[9]: 62.416666666666664

In [ ]:
```
print("lax!Are You Hungery? No Time For Lunch")
print()
```