Assignment 6

The due date for submitting this assignment has passed. **Due on 2020-03-11, 23:59 IST.**

Assignment submitted on 2020-03-11, 23:36 IST

Give that the statement chr(ord(alpha) + i) returns the character(alphabet or a special character) at the location i ahead than the alphabet alpha, eg, chr(ord('a')+1) returns 'b'; what is the output of the following code? ***1 point***

```
def encrypt(ltr,key):
  l=[]
  for each in list(ltr):
    l.append(chr(ord(each) + 1))
  return ("".join(l))

letter_body="ABCDEFGH"
d=encrypt(letter_body,4)
print(d)
```

- ABCDEFGH
- BCDEFGHI
- EFGHIJKL
- none of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
BCDEFGHI

What does the following code do? ***1 point***

```
def guess(num):
  a=input("Guess a number")
  if(a==num):
    print("SUCCESS")
  else:
    guess(num)

guess(10)
```

- Keeps asking the user to guess a number until the user guesses 10
- The computer generates a random number r and keeps it. The user is repeatedly prompted to enter a number. If the user enters r, the code says success and ends, else the prompting is continued.
- Enters an infinite loop
- The computer generates a random number r and keeps it. The user is repeatedly prompted to enter a number. If the user enters r, the code says success and ends, else the computer generates a new random number r and thereafter the prompting is continued.

Yes, the answer is correct.
Score: 1

Accepted Answers:
Enters an infinite loop

What does the following code do? ***1 point***

```
import random
def guess(num):
  a=int(input("Guess a number from 1 to 100"))
  print(a,num)
  if(a==num):
    print("SUCCESS")
  else:
    guess(random.randint(1,100))

i=guess(random.randint(1,100))
```

- Keeps asking the user to guess a number until the user guesses 10
- The computer generates a random number r and keeps it. The user is repeatedly prompted to enter a number. If the user enters r, the code says success and ends, else the prompting is continued.
- Enters an infinite loop
- The computer generates a random number r and keeps it. The user is repeatedly prompted to enter a number. If the user enters r, the code says success and ends, else the computer generates a new random number r and thereafter the prompting is continued.

No, the answer is incorrect.
Score: 0

Accepted Answers:
The computer generates a random number r and keeps it. The user is repeatedly prompted to enter a number. If the user enters r, the code says success and ends, else the computer generates a new random number r and thereafter the prompting is continued.

With n as input, the code below computes **1 point**

```
def mul(num):
  if(num==1):
    return(-1)
  return(-1*mul(num-1))

n=int(input("Enter the value of n"))
print(mul(n))
```

- $-1 \times n$
- $-1 + n$
- $(-1)^n$
- $n^{(-1)}$

Yes, the answer is correct.
Score: 1

Accepted Answers:
$(-1)^n$

The following code **1 point**

```
import random
def search(l,loc,item):
  if(loc<0):
    loc=0
  if(l[loc]==item):
    print("Found",item,"at index",loc)
    return
  if(loc==len(l)-1):
    print("Element not present")
    return(0)
  else:
    return(search(l,loc+1,item))

l=[1,2,3,4,5,6,7,8,9]
search(l,-11,3)
```

- displays an error
- does not display an error but might display the error if we change the middle value passed in the function search() from 0 to some negative value.
- Can return a negative value in some cases when we change the values passed to the function search()
- Scans the list from first to the last element and displays the index of the value passed in the last number in the function search().

Yes, the answer is correct.
Score: 1

Accepted Answers:
Scans the list from first to the last element and displays the index of the value passed in the last number in the function search().

The following code represents **1 point**

```
import random
def search(l,loc,item):
  if(loc<0):
    loc=0
  if(l[loc]==item):
    print("Found",item,"at index",loc)
    return
  if(loc==len(l)-1):
    print("Element not present")
    return(0)
  else:
    return(search(l,loc+1,item))

l=[1,2,3,4,5,6,7,8,9]
search(l,-11,3)
```

- recursive algorithm for linear search an element in a list
- recursive algorithm for binary search an element in a list
- non-recursive algorithm for linear search an element in a list
- none of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
recursive algorithm for linear search an element in a list

What is the output of print(int(3.79)+int(2.1))? ***1 point***

- 6
- 5
- 7
- 4

Yes, the answer is correct.
Score: 1

Accepted Answers:
5

The following code to its best, represents a scenario ***1 point***

```
def func(i):
    print(i)
    if(i==0):
        print("OVER")
    else:
        func(i/2)
```

- A cake getting eaten by half of its current amount every time
- A student attempting alternate questions, starting from a given question
- Viruses doubling inside a body and killing the person once their population becomes 128 or more.
- Metro train serving 128 stations to and fro

Yes, the answer is correct.
Score: 1

Accepted Answers:
A cake getting eaten by half of its current amount every time

The following code to its best, represents a scenario ***1 point***

```
def func(i):
    print(i)
    if(i>128):
        print("OVER")
    else:
        func(2*i)
```

- A cake getting eaten by half of its current amount every time
- A student attempting alternate questions, starting from a given question
- Viruses doubling inside a body and killing the person once their population becomes 128 or more.
- Metro train serving 128 stations to and fro

Yes, the answer is correct.
Score: 1

Accepted Answers:
Viruses doubling inside a body and killing the person once their population becomes 128 or more.

The following code to its best, represents a scenario ***1 point***

```
def func(i,f):
    print(i)
    if(i==0):
        f=1
        func(i+1,f)
    if(i==128):
        f=-1
        func(i-1,f)
    if(f==1):
        func(i+1,f)
    if(f==-1):
        func(i-1,f)
```

- A cake getting eaten by half of its current amount every time
- A student attempting alternate questions, starting from a given question
- Viruses doubling inside a body and killing the person once their population becomes 128 or more.
- Metro train serving 128 stations to and fro

Yes, the answer is correct.
Score: 1

Accepted Answers:
Metro train serving 128 stations to and fro