Simple If condition questions

```python
# q1.wap to check whether the person eligible to vote or not
age=int(input('enter the age:'))
if age>=18:
    print("you are eligible for vote😄")

#2.wap to check wheher character is vowel
char=input('enter a char:')
if char=='a' or char=='e'or char=='i' or char=='u'or char=='e':
    print('it is vowel')

if char in 'aeiouAEIOU':
    print('this is vowel')
```

```python
#7.wap to check whether a character is upper case or not

char=input('enter a char:')
if 'A'<= char <='Z':
    print('it is upper case')

#8.wap to check whether a character is lower case or not

char=input('enter a char:')
if 'a'<= char <='z':
    print('it is lower case')
```

```python
#3.wap to check character is consonant or not
char=input('enter a char:')
if char not in 'aeiouAEIOU':
    print('this is cons')


#4 wap to check whether is even
num=int(input('enter a number:'))


if num%2==0:
    print("number is even")
```

```python
#9.wap to check whether a character is digit or not

char=input('enter a char:')
if '0'<= char <='9':
    print('it is digit')

#10. wap to check whether a characater is special char or not

char=input('enter a char:')

if not('A'<= char <='Z' or 'a'<= char <='z' or '0'<= char <='9'):
    print('it is the special character')
```

```python
#5 . wap to check whether the given data is float data type
data=eval(input('enter the data:'))

if type(data)==float:
    print('this is float data type')

#6.wap to check whether data is mutuble or not
data=eval(input('enter the data:'))
if type(data)==list or type(data)==set or type(data)==dict:
    print('this is mututable dt')
#OR
if type(data) in [list,set,dict]:
    print('mutuable data:')
```

Nested Loop questions

```python
# q1.wap to get the following output

s = "mission impossible".split()
out = {"mission": 7, "impossible": 10}
output = {}
for word in s:
    length = 0
    for char in word:
        length += 1
    output[word] = length

print(output)
```

```python
# q2. wap to get the following output
s='power star'.split()
out={'power':2,'star':1}
output={}

for word in s:
    length=0
    for char in word:
        if char in('aeiouAEIOU'):
            length+=1
    output[word]=length

print(output)
```

```python
# q3. wap to check whether a given integer is strong or not

num=int(input('enter the number:'))
s=str(num)
sum=0
for char in s:
    sum1=1
    for i in range(1,int(char)+1):

        sum1=sum1*i
    sum+=sum1

if sum==num:
    print('strong num')
else:
    print('not a strong num')
```

```python
# q4. wap to get the following output

s = "bacbcaabbccc"
out = "b4a3c5"

output = ""

for i in s:
    cnt = 0
    for j in s:
        if i == j:
            cnt += 1

    if i not in output:
        output += i + str(cnt)

print(output)
```

```python
# q5. wap to get the following output

s = {10: "star", 20: "bye", 30: "moon", 40: "apple"}
out = {10: "a", 20: "e", 30: "oo", 40: "ae"}

output = {}
for i in s:
    val=s[i]
    char=''
    for j in val:
        if j in 'aeiouAEIOU':
            char+=j
    output[i]=char

print(output)
```

If--else condition questions

```python
#1.wap to check whether a given number is even or odd
num=int(input('enter a number:'))
if num%2==0:
    print('even number')

else:
    print('odd number')


#2.wap to check whether the number is divisible by 9 or not

num=int(input('enter a number:'))
if num%9==0:
    print('number is divisible by 9')

else:
    print('number is not divisible by 9')
```

```python
#3.wap to check whether given string is palindrom or not
#eg madam,i,malayalam
str=input('enter the string:')
if str==str[::-1]:
    print("it is palindrom number")
else:
    print("it is not palindrom number")
```

Elif condition questions

```python
#1.wap to check wether the char is upper , lower,digit or special

char=input('enter the char:')
if 'A'<=char<='Z':
    print('upper case:')

elif 'a'<=char<='z':
    print('lower case')

elif '0'<=char<='9':
    print('digit case')

else:
    print('special case')
```

```python
#3.wap to check greater among 3 number

a=int(input('enter first num:'))
b=int(input('enter second num:'))
c=int(input('enter third num:'))


if a>=b and a>=c:
    print(f'{a} is greater num')
elif b>=a and b>=c:
    print(f'{b} is greater number')

else:
    print(f'{c} is greater number')
```

```python
#2 wap to check a given integer is 1digit , 2digit , 3 digit or more than 3
digit

#also can be done by type casting

num=int(input('enter a number:'))
if num>=-9 and num<=9:
    print('1 digit number')

elif 10<=num<=99 or -99<=num<=-10:
    print('2 digit number')

elif 100<=num<=999 or -999<=num<=-100:
    print('3 digti number')

else:
    print('more than 3 digits')
```

Nested If condition questions

```python
#1.wap to check username and password are correct

og_username='yash123'
og_password='yash@123'

uname=input('enter the username:')
if uname==og_username:
    pwd=input('enter the password:')
    if pwd==og_password:
        print('login successfully✅')
    else:
        print('Incorrect password ❌')
else:
    print('Incorrect username ❌')
```

```python
#q2. wap to print the middle character of the string only if it it is uppercase
#'good'

str_input = input('Enter the string: ')

if len(str_input) % 2 != 0:
    mid = str_input[len(str_input) // 2]
    if 'A' <= mid <= 'Z':
        print(f'Middle character is {mid}')
    else:
        print('Middle character is not uppercase')
else:
    print('Length is an even number')
```

```python
#2 wap to check a given integer is 1digit , 2digit , 3 digit or more than 3
digit

#also can be done by type casting

num=int(input('enter a number:'))
if num>=-9 and num<=9:
    print('1 digit number')

elif 10<=num<=99 or -99<=num<=-10:
    print('2 digit number')

elif 100<=num<=999 or -999<=num<=-100:
    print('3 digti number')

else:
    print('more than 3 digits')
```

While Loop condition questions

```python
# q1. wap to print 'kiit is a good college' for 100 times

i = 0
while i < 100:
    print("kiit is a good college")
    i += 1

# q2. wap to print even number
i = 2
while i <= 100:
    print(i, end=" ")
    i += 2

# q3. wap to print multipliction table by using user table

num=int(input('enter table num:'))
i=1
while i<=10:
    print(f'{num} x {i}={num*i}')
    i+=1
```

```python
# q8. wap to extract special case character from the given str

s='Kithne #$%^&aadmi 12345678 they $%^&() sardar 6 aadmee %^&*() they'
out='elloowyo'
output=''
i=0
while i<len(s):
    if not( 'a'<=s[i]<='z' or 'A'<=s[i]<='z' or '0'<=s[i]<='9'):
        output+=s[i]

    i+=1

print(output)
```

```python
# q4. wap to find the sum of n natural number
num=int(input('enter a num'))
i=1
sum=0
while i<=num:
    sum+=i
    i+=1

print('sum of natural num: ',sum)

# q5.wap to find the factorial for given num

num=int(input('enter a number:'))
fact=1
i=1
while i<=num:
    fact=fact*i
    i+=1
print(f'factorail of {num} is {fact}')

# q6. wap to get the following output

s='we are KIIT students we are the best developers'
output ='we_are_KIIT_students_we_are_the_best_developers'
```

```python
# q9. wap to extract only interger from a given list

l = [10, 345, 5.6, True, 567, "KIIT", [1, 2, 3, 4, 5]]
out=[10,234,567]
output = []
i = 0
while i < len(l):
    if type(l[i]) == int:
        output.append(l[i])

    i += 1

print(output)
```

```python
# q10. wap to get the following output

# l = [10, 20, True, "hello", "eye", "Level", "gabber singh", "palindrom",
"malayalam"]
# out=['eye','level','malayalam']
out = []

i = 0
while i < len(l):
    if type(l[i]) == str:
        if l[i] == l[i][::-1]:
            out.append(l[i])

    i += 1

print(out)
```

```python
        print(f'factorial of {num} is {fact}')
```

```python
# q6. wap to get the following output

s='we are KIIT students we are the best developers'
output ='we_are_KIIT_students_we_are_the_best_developers'

i=0
s = 'we are KIIT students we are the best developers'
output = ''
i = 0
print(len(s))

while i < len(s):
    if s[i] == ' ':
        output += '_'
    else:
        output += s[i]
    i += 1

print(output)
```

```python
# q7. wap to extract lower case character from the given st

s='Hello How ARE yoU?'
out='elloowyo'
output=''
i=0
while i<len(s):
    if 'a'<=s[i]<='z':
        output+=s[i]

    i+=1

print(output)
```

```python
        if l[i] == l[i][::-1]:
            out.append(l[i])

    i += 1

print(out)
```

```python
# q11. wap to sum of individual values of an integer without type casting
num = 123
# out=1+2+3-->6
s=str(num)
sum=0
i=0

while i<len(s):
    sum+=int(s[i])
    i+=1

print(sum)

# alternate method--last digit method
sum = 0
while num > 0:
    sum += num % 10
    num //= 10

print("sum is ", sum)
```

```python
#q12. wap to remove duplicate values from a given list without using set

list=[10,20,30,10,20,30,10,20]
# output=[10,20,30]

i=0
out=[]
while i<len(list):
    if list[i] not in (out):
        out.append(list[i])
    i+=1

print(out)
```

For Loop condition questions

```python
# q1. wap to print all the integers present in a list
l=eval(input('enter a list'))
for item in l:
    if type(item)==int:
        print(item)
```

```python
# q2 wap to find length of the collection without using len()

l = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

l=eval(input('enter the collection:'))
cnt = 0
for i in l:
    cnt += 1

print("length is :", cnt)
```

```python
# q3 revers the string without using slicing

s = "sanjay"
reversed_s = ''

for i in range(len(s) - 1, -1, -1):
    reversed_s += s[i]

print(reversed_s)

#alternate method
rev = ""
for i in s:
    rev = i+rev

print(rev)
```

```python
# q4. wap to extract all the even numbers present in the tuples
t = (12, 23, 24, 10, 6, 8, 35)
out = ()
for i in t:
    if i % 2 == 0:
        out = out + (i,)
print(out)
```

```python
# q5.wap to get the following output
s='icon star'
s=input('enter a str:').split()
out={'icon':4,'star':4}
dict={}

list=s.split()
for i in list:
    dict[i]=len(i)
print(dict)
```

```python
# q6 wap to get the following output

s='always keep smiling'
out={'always':'syawla','keep':'peek','smiling':'gnilims'}

list=s.split()
output={}
```

```python
# 7 wap to get the following ouput

l=['jiocinema.com','flipkart.in','file.py','index.html','file.java','file.com'
'file2.java']

out=['com','in','py','html','java']
output=[]

for i in l:
    temp=i.split('.')[-1]
    if temp not in output:
        output.append(temp)

print(output)
```

```python
# q8 wap to get following output

l=['jiocinema.com','flipkart.in','file.py','index.html','file.java','file.com',
'file2.java','amazom.com']
# out={'com':['jiocinema','amazom'],'in':['flipkart'],'py':['file'],'html':
['index'],'java':['file','file2']}

output={}

for name in l:
    s=name.split('.')
    key=s[1]
    val=s[0]
    if key in output:
        output[key].append(val)
    else:
        output[key]=[val]

print(output)
```

```python
# q9 wap to get following output
l = ["hai", 34, 3.4, "hello", 90, "byebye"]
out = {"hai": "hi", "hello": "ho", "byebye": "be"}
output = {}
for i in l:
    if type(i) == str:
        output[i] = i[0]+i[-1]
print(output)
```

```python
# q10 wap to get following output
s='HELLO'
out={0:'H',1:'E',2:'L',3:'L',4:'O'}
ind=0
output={}
for i in s:
    output[ind]=i;
    ind=ind+1
print(output)
```

```python
# q11. wap to get following output
s = 'always keep smiling'.split()
out = "syawla peek gnilims"

output = []
```

```python
s='always keep smiling'
out={'always':'syawla','keep':'peek','smiling':'gnilims'}

list=s.split()
output={}

for i in list:
    output[i]=i[::-1]

print(output)
```

```python
s = "always keep smiling".split()
out = "syawla peek gnilims"

output = []

# for word in s:
#     output +=(word[::-1])+' '
# print(output.strip())

for word in s:
    output .append(word[::-1])

print(' '.join(output))
```

Intermediate-Termination questions

```python
# q1. wap to check whether the given num is prime or not
n=int(input('enter a num:'))
for i in range(2,n):
    if n%i==0:
        print('not a prime:')
        break
else:
    print('prime number')
```

```python
# q2. develop a dynamic login functionality
og_username = 'sanjaysah'
og_password = 'sanjay@123'

while True:
    uname = input('Enter your username: ')
    if og_username == uname:
        pwd = input('Enter your password: ')
        if pwd == og_password:
            print('✅ Login successful!')
            break
        else:
            print('❌ Incorrect password. Try again.')
    else:
        print('❌ Incorrect username. Try again.')
```

```python
# q3. wap to develop guessing a number game

import random
#random.randint(sv,ev)

print('guess a number b/w 1 to 100')
num=random.randint(1,100)
while True:
    guess=int(input('enter a num:'))
    if guess > num:
        print('your num is greater')
    elif guess < num:
        print('your num is lesser')

    else:
        print('you are right')
        print('you won the game')
        break
```

```python
# q4. wap to check whether a string is haing all lowercase or not

s = 'Hello'
s = 'sanjay'

for i in s:
    if not ('a' <= i <= 'z'):
        print('Not all characters are in lowercase')
        break
else:
    print('All characters are in lowercase')
```

```python
# q5 . wap to check whether the collection are homo or hetero

l=[10,20,30,3.5,6.7,True]
l=[10,20,30,40]
dt=type(l[0])
for val in l:
    if dt!=type(val):
        print('hetero data')
        break
else:
    print('homo data set')
```

```python
# continue
# demo
for i in range(1,11):
    if i==3 or i==7:
        continue
    print(i)
# q1. wap to print all the odd number between 1 to 100 using continue

for i in range(1,100):
    if i%2==0:
        continue
    print(i)
```

```python
# q2. wap to extract all the upper case char from a given string

s='SanJaY saH from NepaL'
out=''
for i in s:
    if not ('A'<=i<='Z'):
        continue
    out+=i

print(out)
```

```python
# q3. wap to get the following output

s1 = "1110010100"
s2 = "1100010001"
out = 2

cnt = 0

if len(s1) == len(s2):
    for i in range(0, len(s1)):
        if s1[i] == s2[i]:
            continue
        cnt += 1

else:
    print("length is difference")

print(cnt)
```