MD RAJ ASSIGNMENT 3 ON PYTHON

Q1. Multiples of a Number Write a program that prints all multiples of 7 between 1 and 100 using a `while` loop.

```
i=0
while(i<100):
    if(i%7==0):
        print(i,"\n")
    i+=1
```

we are starting the loop from 0 and going till 100 and if i is fully divisible by 7 then printing it.

Q2. Sum Until Limit Ask the user to enter numbers one by one. Stop asking when the sum of entered numbers becomes greater than 100. Use a `while` loop and `break` statement.

```
ans=0

while(True):
    num=int(input("Enter a number:"))
    ans+=num
    print(f'the value of sum is ',ans)
    if(ans>=100):
        print(f'we have reached the maxlimit',ans)
        break
```

Q3. Skip a Character Ask the user to enter a string. Print each character on a new line, but skip the character `'a'` using the `continue` statement.

```
str=input("Enter your name:")
for i in str:
    if i=='a' or i=='A':
        continue
```

MD RAJ ASSIGNMENT 3 ON PYTHON

```
    print(i,"\n")
```

Q4. Login Attempts You are allowed a maximum of 3 login attempts. Ask the user to enter a password (hardcode correct password as "python123"). If the correct password is entered, print "Login Successful" and stop. If not, after 3 attempts, print "Account Locked". Use a loop and `break`.

```
correctPassword='python123'

count=0

while(True):
    password=input("Enter the Password")
    if password!=correctPassword:
        count+=1
        if count>2:
            print("Account Locked")
            break
    elif password==correctPassword:
        print("Login Successfull")
        break
```

Q5. Check Prime Ask the user for a number and check if it is a prime number using a `for` loop. Use the `else` block in the `for` loop effectively.

```
num=int(input("Enter a number"))
flag=True

if(num==1):
    print("Its not a prime number")

for i in range(2,int(num**0.5),+1):
```

MD RAJ ASSIGNMENT 3 ON PYTHON

```
    if(num%i==0):
        flag=False
    else:
        flag=True
else:
    print("program run successfully")


if flag==True:
    print("Its  a prime number")
else:
    print("Its not a prime number")
```

Q6. Skipping Even Numbers Print all odd numbers from 1 to 50 using a `for` loop and `continue` statement to skip even numbers.

```
for i in range(0,50,+1):
    if(i%2==0):
        continue
    print("\n",i)
```

Q7. Use of `pass` Write a program that loops from 1 to 10 and prints each number. If the number is 5, use the `pass` statement (do nothing for that number, but don’t skip it either). Observe the behavior.

```
for i in range(11):
    print(i)
    if i==5:
        pass
```

Q8. Factorial Calculation Ask the user to enter a positive integer and calculate its factorial using a `while` loop.

MD RAJ ASSIGNMENT 3 ON PYTHON

```
num=int(input("Enter a positive integer"))
orginalNum=num

ans=1
while(num):
    ans*=num
    num-=1

print(f'factorial of {orginalNum} is {ans} ')
```

Q9. Countdown Timer Write a countdown from 10 to 1 using a `for` loop. After reaching 1, print "Liftoff!"

```
for i in range(10,0,-1):
    if(i==1):
        print("Liftoff")
        break
    print(i)
```

Q10. Skip on Condition Ask the user to enter a number from 1 to 20. Print all numbers from 1 to 20 except the number entered by the user using `continue`.

```
user_input = int(input("Enter a number between 1 and 20: "))

print("Numbers from 1 to 20 excluding", user_input, ":")

for i in range(1, 21):
    if i == user_input:
        continue
```

MD RAJ ASSIGNMENT 3 ON PYTHON

```
print(i)
```