

1) Python Program to replicate bank transaction: min balance 500, ask user to the amount to withdraw,

print the balance amount after withdrawal, if user enters an amount greater than balance: print:: insufficient balance.

```
In [79]: withdraw_amount=int(input("Enter Your Amount = "))
user_balance=1000
minimum_balance=500

if withdraw_amount<=minimum_balance and withdraw_amount<=1000:
    print(withdraw_amount,"rs withdraw Successfully")
    print("Your current balance is = ",user_balance-withdraw_amount)
elif withdraw_amount>user_balance and withdraw_amount>minimum_balance:
    print("insufficient balance ")
elif withdraw_amount>minimum_balance:
    print("Minimum Balance is 500")
    print("Your Available Balance = ",user_balance,"rs Please keep your account balance above Rs.500 to avoid unwanted charges.")
else:
    print("something went wrong try again")

Enter Your Amount = 750
Minimum Balance is 500
Your Available Balance = 1000 rs Please keep your account balance above Rs.500 to avoid unwanted charges.
```

2) Print the greatest of the 3 numbers taken as input, print equal if all three numbers are the same

```
In [56]: number1=int(input("Enter The Value = "))
number2=int(input("Enter The Value = "))
number3=int(input("Enter The Value = "))

if number1>number2 and number1>number3:
    print("Number 1 is gratest")
elif number2>number1 and number2>number3:
    print("Number 2 is gratest")
elif number3>number1 and number3>number2:
    print("Number 3 is gratest")
elif number1==number2==number3:
    print("All the Numbers Are same")
else:
    print("all three numbers not equal")

Enter The Value = 45
Enter The Value = 10
Enter The Value = 15
Number 1 is gratest
```

3 Python program to check the number taken as an input is even or odd,print invalide input if user enters anything other than integers

```
In [75]: # using Exception Handling
while True:
    try:
        number = int(input("Please enter The Value: "))
    except ValueError:
        print("Please Enter A Numeric Value")
        continue
    else:
        break
if number%2==0:
    print(number," is a Even Number")
else:
    print(number,"is a Odd Number ")

Please enter The Value: a3
Please Enter A Numeric Value
Please enter The Value: 24
24 is a Even Number
```

4 Python program to check the score from a student ,print grades as A+ if score >= 90,A if 80 or above, B+ if 70 or above and so on...

print failed if the score is below 50, if score > 100 print invalid

```
In [91]: name=input("Enter The Student Name = :")
Marks=int(input("Enter The Marks = :"))

if Marks>=90 and Marks<=100:
    print(name,"You score A+")
elif Marks<=89 and Marks>=80:
    print(name,"you score A ")
elif Marks>70 and Marks<=80:
    print(name,"you got B+")
elif Marks>60 and Marks<=70:
    print(name,"you got B")
elif Marks>50 and Marks<=60:
    print(name,"you got C+")
elif Marks>40 and Marks<=50:
    print(name,"you got C")
elif Marks<50:
    print(name,"Your Fail")
elif Marks>=100:
    print("Invalid")
else:
    print("Some thing went Wrong")

Enter The Student Name = :ajith
Enter The Marks = : 99
ajith You score A+
```

5. Python program to print all even/odd numbers in the range given by user

```
In [181]: print("Even Numbers      odd Numbers")
for i in range(2,22):
    if i%2==0:
        print(i,end=' \t\t\t ')

    elif i%2!=0:
        print(i)
```

Even Numbers	odd Numbers
2	3
4	5
6	7
8	9
10	11
12	13
14	15
16	17
18	19
20	21

```
In [219]: b=[]
c=[]

for i in range(1,21):
    if i%2==0:
        b.append(i)
print("Even Numbers = ",b)
for j in range(1,21):
    if j%2!=0:
        c.append(j)
print("odd Numbers = ",c)

Even Numbers = [2, 4, 6, 8, 10, 12, 14, 16, 18, 20]
odd Numbers = [1, 3, 5, 7, 9, 11, 13, 15, 17, 19]
```

6. Python program to print the multiplication table of any number (number should be taken as input and user decides the end limit of the table)

```
In [131]: users=int(input("Enter The Table Number = "))
end=int(input("Enter the limit = "))

for i in range(1,end):
    print(i,"*",user,"=",i*user)

Enter The Table Number = 7
Enter the limit = 8
1 * 7 = 7
2 * 7 = 14
3 * 7 = 21
4 * 7 = 28
5 * 7 = 35
6 * 7 = 42
7 * 7 = 49
```

7. Find the factorial of a number taken as input using for loop

```
In [133]: number=int(input("Enter The Value = :"))
factorial=1
for i in range(1,number+1):
    factorial=factorial*i
print(factorial)

Enter The Value = :5
120
```

8 . Find the factorial of a number taken as input using while loop

```
In [137]: number=int(input("Enter the Value = "))
fact= 1
while number >= 1:
    fact = fact * number
    number = number - 1
print("fact")

Enter the Value = 5
120
```

9 . Find the sum of all even numbers between the range given by user

```
In [224]: start = int(input("Enter The value = "))
end = int(input("Enter The value = "))

sum_=0
for i in range(start,end):
    if i%2==0:
        sum_+=i
print("sum of ",start,"to",end,"=",sum_)

Enter The value = 1
Enter The value = 50
sum of 1 to 50 = 680
```

10 . Find the sum of all odd numbers between the rane given by user using while loop

```
In [153]: number=int(input("Enter The Value = "))
sum_=0
i=1
while i<=number:
    if i%2!=0:
        sum_+=i
    i=i+1

print("sum of odd numbers between 1 to 10 = ",sum_)

Enter The Value = 10
sum of odd numbers between 1 to 10 = 25
```

11 . Print first 10 fibonacci numbers using 'for' and 'while' loops

```
In [169]: # Fibonacci sequence using while loop

number = int(input ("Enter the Value = "))

x = 0
y = 1
count = 0

if number <= 0:
    print("Please enter a positive value = ")
elif number == 1:
    print ("The Fibonacci sequence of the numbers up to",number, ": ")
    print(x)
else:
    print ("The fibonacci sequence of the numbers is:")
    while count < number:
        print(x)
        add = x + y

        x = y
        y = add
        count += 1

Enter the Value = 10
The fibonacci sequence of the numbers is:
0
1
1
2
3
5
8
13
21
34
```

```
In [187]: # Fibonacci sequence using For loop

number=int(input("Enter The Value = "))

if number <= 0:
    print("Please enter a positive value = ")
elif number == 1:
    print ("The Fibonacci sequence of the numbers up to",number, ": ")
    print(x)
else:
    a=0
    b=1
    count=0
    for i in range(number):
        print(c)
        c=a+b
        a=b
        b=c

Enter The Value = 10
34
1
1
2
3
5
8
13
21
34
```

12. print the following patterns

```
In [200]: # a)

x=int(input("Enter the Value = "))

for i in range(1,10,2):
    print(x*" ",i***)
    x=x-1

Enter the Value = 10
*
***
*****
*****
*****
```

```
In [208]: #b)

x = 1
for i in range(0, 5):
    for j in range(0, i+1):
        print(x, end=" ")
        x = x + 1
    print()

1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
```

```
In [205]: # c)

rows = int(input("Enter the rows = "))
for i in range(1,rows):
    for j in range(1):
        print(i,end=" ")
    print()

Enter the rows = 10
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5
6 6 6 6 6 6
7 7 7 7 7 7 7
8 8 8 8 8 8 8 8
9 9 9 9 9 9 9 9 9
```

```
In [209]: # d)

for i in range(1,10):
    print(i***)

*
**
***
****
*****
*****
*****
*****
```

In [] :