

# LAB ASSIGNMENT 1

NAME : UTKARSH YADAV

ROLL : 23053172

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In [1]: #name: "Utkarsh Yadav" roll: "23053172"
# Write a program to print your name.
print("My name is Utkarsh Yadav")
```

My name is Utkarsh Yadav

```
In [2]: #name: "Utkarsh Yadav" roll: "23053172"
#Print the sum of two numbers entered by the user.
a = int(input("Enter first number: "))
b = int(input("Enter second number: "))
print(f"sum: {a+b}")
```

sum: 30

```
In [3]: #name: "Utkarsh Yadav" roll: "23053172"
#Swap two variables without using a third variable.
a = input("Enter a variable: ")
b = input("Enter another variable: ")
print(f"Before swapping: a: {a}, b: {b}")
temp = a
a = b
b = temp
print(f"Swapped values: a : {a}, b: {b}")
```

Before swapping: a: 19, b: 20

Swapped values: a : 20, b: 19

```
In [4]: #name: "Utkarsh Yadav" roll: "23053172"
#Find the square and cube of a number

a = int(input("Enter a number: "))
print(f"square: {a*a}, cube: {a*a*a}")
```

square: 100, cube: 1000

```
In [5]: #name: "Utkarsh Yadav" roll: "23053172"
#Write a program to find the ASCII value of a character.

a = input("Enter a character: ")
print(f"ascii value of {a}: {ord(a)}")
```

ascii value of a: 97

```
In [6]: #name: "Utkarsh Yadav" roll: "23053172"
#Convert Celsius to Fahrenheit.

cels = float(input("Enter celcius: "))
fahr = (cels*1.8)+32
print(f"Celsius: {cels:.2f}, Fahrenheit: {fahr:.2f}")
```

Celsius: 100.00, Fahrenheit: 212.00

```
In [7]: #name: "Utkarsh Yadav" roll: "23053172"
#Write a program to compute simple interest.

p, r, t = map(float, input("Enter Principal, Rate and Time(in years): ").split())
print(f"Simple Interest: {(p*r*t)/100}")
```

Simple Interest: 400.0

```
In [8]: #name: "Utkarsh Yadav" roll: "23053172"
#Check whether a number is positive, negative, or zero.

a = int(input("Enter a number: "))
if a > 0:
    print("Positive")
elif a < 0:
    print("Negative")
else:
    print("Zero")
```

Positive

```
In [9]: #name: "Utkarsh Yadav" roll: "23053172"
#Find the Largest of three numbers.

a, b, c = map(int, input("Enter Three Numbers: ").split(", "))
largest = a if a >= b and a >= c else b if b >= a and b >= c else c
print(f"{largest}")
```

30

```
In [10]: #name: "Utkarsh Yadav" roll: "23053172"
#Check whether a number is even or odd.
a = int(input("Enter a number: "))
res = "Even" if a%2 == 0 else "Odd"
print(res)
```

Even

```
In [11]: #name: "Utkarsh Yadav" roll: "23053172"
#Write a program to check Leap year

def checkLeap(year):
    if year % 400 == 0:
        print("Leap")
    elif year % 100 == 0:
        print("Not Leap")
    elif year % 4 == 0:
        print("Leap")
    else:
        print("Not Leap")

checkLeap(2025)
checkLeap(23053172)
checkLeap(2004)
```

Not Leap

Leap

Leap

```
In [12]: #name: "Utkarsh Yadav" roll: "23053172"
#Write a program to calculate area of a circle.

rad = float(input("enter radius of circle: "))
print(f"area: {3.14 * rad ** 2}")
```

area: 31400.0

```
In [13]: #name: "Utkarsh Yadav" roll: "23053172"
#Convert kilometers to miles.

km = float(input("Enter distance in km: "))
print(f"Miles: {km * 0.621371} miles")
```

Miles: 62.137100000000004 miles

```
In [14]: #name: "Utkarsh Yadav" roll: "23053172"
#Write a Python program to take user input and print data type.

a = input("Enter data: ")
b = int(input("Enter integer: "))
c = float(input("Enter float: "))
print(type(a))
print(type(b))
print(type(c))
```

```
<class 'str'>
<class 'int'>
<class 'float'>
```

```
In [15]: #name: "Utkarsh Yadav" roll: "23053172"
#Write a program to reverse a number (e.g., 123 → 321).

num = 23053172

rem = num
rev = 0

while rem > 0:
    rev = rev*10 + rem%10
    rem = rem//10

print(f"{rev}")
```

27135032

```
In [16]: #name: "Utkarsh Yadav" roll: "23053172"
#Write a program to compute the remainder without using % operator.

a = int(input("Enter dividend: "))
b = int(input("Enter divisor: "))

# quotient = a // b
# remainder = a - b * quotient

# print(f"{remainder}")

while a > b:
    a = a-b

print(a)
```

10

```
In [17]: #name: "Utkarsh Yadav" roll: "23053172"
#Check whether a character is a vowel or consonant
a = input("Enter a character: ").lower()

if a in ['a', 'e', 'i', 'o', 'u']:
    print("vowel")
else:
    print("consonant")
```

vowel

```
In [18]: #name: "Utkarsh Yadav" roll: "23053172"
#Write a program to print first 10 natural numbers

for i in range(1, 11):
    print(i)
```

1  
2  
3  
4  
5  
6  
7  
8  
9  
10

```
In [19]: #name: "Utkarsh Yadav" roll: "23053172"
#Convert minutes into hours and minutes format.

minutes = int(input("Enter minutes: "))
print(f"Hours: {minutes//60}, Minutes: {minutes%60}")
```

Hours: 2, Minutes: 5

```
In [20]: #name: "Utkarsh Yadav" roll: "23053172"
#Write a program to calculate compound interest.
p, r = map(float, input("Enter Principal and interest: ").split(", "))
n, t = map(int, input("Enter number of times and years: ").split(", "))

compoundInterest = (p*((1 + (r/n))**(n*t)))-p
print(f"Compound Interest: {compoundInterest:.2f}")
```

Compound Interest: 2176782335000.00