

SHAKUNTALA KRISHNA INSTITUTE OF TECHNOLOGY KANPUR DEHAT

Practical Work of Python

Programming

BCA - 3006P

2026-2027

Student Name	**Class**
Roll Number	**Submitted To**

Date: _____

SHAKUNTALA KRISHNA INSTITUTE OF TECHNOLOGY

KANPUR DEHAT, UTTAR PRADESH

BACHELOR OF COMPUTER APPLICATIONS (BCA)

CERTIFICATE

This is to certify that Mr./Ms. _____, Roll No. _____, a student of BCA _____ Year / Semester, has satisfactorily completed the practical work in the subject "_____" during the Academic Session _____, under my guidance and supervision.

The work submitted in this practical file is found satisfactory and is being submitted as a part of the academic requirements of the BCA programme.

_____	_____
Subject Teacher	**Head of Department**
_____	_____
External Examiner	**Principal**

Date: _____ **Place: Kanpur Dehat**

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Yours sincerely,

Name: _____

Roll No.: _____

BCA _____ **Year / Semester**

Program – 1: First Program of Python

```
print("Hello, World!")
```

Program – 2: Input of int, float and string

```
name = input("Enter your name: ")
age = int(input("Enter your age: "))
marks = float(input("Enter your marks: "))

print("Name =", name)
print("Age =", age)
print("Marks =", marks)
```

Program – 3: Explicit Type Casting

```
a = "10"
b = int(a)

print(a)
print(type(a))
print(b)
print(type(b))
```

Program – 4: Implicit Type Casting

```
a = 10
b = 5.5
c = a + b

print(c)
print(type(c))
```

Program – 5: While Loop – Table of 19

```
i = 1
while i <= 10:
    print("19 x", i, "=", 19 * i)
    i = i + 1
```

Program – 6: While Loop – Table of 19 (Practice)

```
i = 1
while i <= 10:
    print("19 x", i, "=", 19 * i)
    i = i + 1
```

Program – 7: While Loop – Even Numbers from 1 to 100

```
i = 1
while i <= 100:
    if i % 2 == 0:
        print(i)
    i = i + 1
```

Program – 8: While Loop – Odd Numbers from 1 to 100

```
i = 1
while i <= 100:
    if i % 2 != 0:
        print(i)
    i = i + 1
```

Program – 9: Add Two Numbers

```
a = int(input("Enter first number: "))
b = int(input("Enter second number: "))
result = a + b
print("Addition =", result)
```

Program – 10: Check Number Even or Odd

```
num = int(input("Enter a number: "))
if num % 2 == 0:
    print("Even number")
else:
    print("Odd number")
```

Program – 11: Largest of Two Numbers

```
a = int(input("Enter first number: "))
b = int(input("Enter second number: "))

if a > b:
    print(a, "is greater")
elif b > a:
    print(b, "is greater")
else:
    print("Both numbers are equal")
```

Program – 12: Sum of 1 to 10 using While Loop

```
i = 1
sum = 0
while i <= 10:
    sum = sum + i
    i = i + 1
print("Sum =", sum)
```

Program – 13: Python Built-in Data Types

```
x = 10
print(type(x))

y = 10.05
print(type(y))

z = 1 + 0j
print(type(z))

a = "hello"
print(type(a))

b = ['a', 1, 'abc']
print(type(b))

c = ("zeroIndex", "firstIndex", "SecondIndex")
print(type(c))

d = {"BCA", "BBA", 1}
print(type(d))

e = frozenset(["a", "b", "c", "d"])
print(type(e))

f = True
print(type(f))

g = {"name": "Adarsh", "Class": "BCA"}
print(type(g))

h = None
print(type(h))

i = b"Python"
print(type(i))

j = bytearray(b"Python")
print(type(j))

k = memoryview(j)
print(type(k))
```

Program – 14: Positive, Negative or Zero

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

Program – 15: Largest of Three Numbers [PYQ-style]

```
a,b,c = map(int, input("Enter three numbers: ").split())
if a >= b and a >= c: print(a, "is largest")
elif b >= a and b >= c: print(b, "is largest")
else: print(c, "is largest")
```

Program – 16: Smallest of Three Numbers

```
a,b,c = map(int, input().split())
print("Smallest =", min(a,b,c))
```

Program – 17: Leap Year

```
year = int(input("Enter year: "))
if year % 400 == 0 or (year % 4 == 0 and year % 100 != 0):
    print("Leap Year")
else:
    print("Not a Leap Year")
```

Program – 18: Vowel or Consonant

```
ch = input("Enter character: ")
if ch.lower() in "aeiou": print("Vowel")
else: print("Consonant")
```

Program – 19: Grade from Marks

```
marks = float(input("Enter marks: "))
if marks >= 90: print("A+")
elif marks >= 80: print("A")
elif marks >= 70: print("B")
elif marks >= 60: print("C")
elif marks >= 50: print("D")
else: print("Fail")
```

Program – 20: Simple Calculator using if-elif

```
a = float(input("First: "))
b = float(input("Second: "))
op = input("Operator: ")
if op == "+": print(a+b)
elif op == "-": print(a-b)
elif op == "*": print(a*b)
elif op == "/": print(a/b)
else: print("Invalid operator")
```

Program – 21: Calculator using match-case

```
a = float(input("First: "))
b = float(input("Second: "))
op = input("Operator: ")
match op:
    case "+": print(a+b)
    case "-": print(a-b)
    case "*": print(a*b)
    case "/": print(a/b)
    case _: print("Invalid operator")
```

Note: match-case syntax requires Python 3.10 or newer.

Program – 22: Multiplication Table using for Loop

```
n = int(input("Enter number: "))
for i in range(1, 11):
    print(n, "x", i, "=", n*i)
```

Program – 23: Sum of First N Natural Numbers

```
n = int(input("Enter N: "))
s = 0
for i in range(1, n+1): s += i
print("Sum =", s)
```

Program – 24: Factorial of a Number [High priority]

```
n = int(input("Enter number: "))
fact = 1
for i in range(1, n+1): fact *= i
print("Factorial =", fact)
```

Program – 25: Fibonacci Series [PYQ]

```
n = int(input("How many terms: "))
a, b = 0, 1
for i in range(n):
    print(a, end=" ")
    a, b = b, a+b
```

Program – 26: Prime Number Check [PYQ]

```
n = int(input("Enter number: "))
if n < 2:
    print("Not Prime")
else:
    for i in range(2, int(n**0.5)+1):
        if n % i == 0:
            print("Not Prime")
            break
    else:
        print("Prime")
```

Program – 27: Prime Numbers in a Range

```
start,end = map(int,input().split())
for n in range(start,end+1):
    if n < 2: continue
    for i in range(2,int(n**0.5)+1):
        if n%i==0: break
    else: print(n,end=" ")
```

Program – 28: Count Divisors of a Number [PYQ]

```
n = int(input("Enter number: "))
count = 0
for i in range(1,n+1):
    if n%i==0: count += 1
print("Number of divisors =", count)
```

Program – 29: Armstrong Number [PYQ]

```
n = int(input("Enter number: "))
temp = n
digits = len(str(n))
s = 0
while temp:
    d = temp % 10
    s += d ** digits
    temp //= 10
if s == n: print("Armstrong")
else: print("Not Armstrong")
```

Program – 30: Armstrong Numbers from 100 to 200 [PYQ]

```
for n in range(100,201):
    s = sum(int(d)**3 for d in str(n))
    if s == n: print(n,end=" ")
```

Program – 31: Palindrome Number

```
n = input("Enter number: ")
if n == n[::-1]: print("Palindrome")
else: print("Not Palindrome")
```

Program – 32: Reverse a Number

```
n = input("Enter number: ")
print("Reverse =", n[::-1])
```

Program – 33: Sum of Digits

```
n = input("Enter number: ")
print("Sum =", sum(int(d) for d in n))
```

Program – 34: Count Digits

```
n = input("Enter number: ")
print("Digits =", len(n.lstrip("-")))
```

Program – 35: GCD of Two Numbers

```
import math
a,b = map(int,input().split())
print("GCD =", math.gcd(a,b))
```

Program – 36: LCM of Two Numbers

```
import math
a,b = map(int,input().split())
print("LCM =", math.lcm(a,b))
```

Program – 37: Perfect Number

```
n = int(input("Enter number: "))
s = sum(i for i in range(1,n) if n%i==0)
print("Perfect" if s==n else "Not Perfect")
```

Program – 38: Strong Number

```
import math
n = int(input("Enter number: "))
s = sum(math.factorial(int(d)) for d in str(n))
print("Strong" if s==n else "Not Strong")
```

Program – 39: Fahrenheit to Celsius

```
f = float(input("Fahrenheit: "))
print("Celsius =", (f-32)*5/9)
```

Program – 40: Celsius to Fahrenheit

```
c = float(input("Celsius: "))
print("Fahrenheit =", c*9/5+32)
```

Program – 41: Pattern – Right Triangle

```
n = int(input("Rows: "))
for i in range(1,n+1):
    print("*"*i)
```

Program – 42: Pattern – Number Triangle

```
n = int(input("Rows: "))
for i in range(1,n+1):
    for j in range(1,i+1): print(j,end=" ")
    print()
```

Program – 43: Pattern – Inverted Triangle

```
n = int(input("Rows: "))
for i in range(n,0,-1):
    print("*"*i)
```

Program – 44: Pattern – Pyramid

```
n = int(input("Rows: "))
for i in range(1,n+1):
    print(" "*(n-i)+"*"*(2*i-1))
```

Program – 45: List Input and Traversal [High priority]

```
a = list(map(int,input("Enter elements: ").split()))
for x in a: print(x)
```

Program – 46: Sum and Average of List [High priority]

```
a = list(map(int,input().split()))
print("Sum =",sum(a))
print("Average =",sum(a)/len(a))
```

Program – 47: Largest Element in List

```
a = list(map(int,input().split()))
print("Largest =",max(a))
```

Program – 48: Smallest Element in List

```
a = list(map(int,input().split()))
print("Smallest =",min(a))
```

Program – 49: Search Element in List

```
a = list(map(int,input().split()))
key = int(input("Search: "))
if key in a: print("Found")
else: print("Not Found")
```

Program – 50: Count Even and Odd in List

```
a = list(map(int,input().split()))
even = sum(x%2==0 for x in a)
odd = len(a)-even
print("Even =",even,"Odd =",odd)
```