🔹 SECTION 1: INPUT & OUTPUT (1–25)

1. Print Hello World

```
print("Hello World")
```

2. Print your name

```
print("Athar Ahmed")
```

3. Input name and print

```
name = input()
print(name)
```

4. Input age and print

```
age = input()
print(age)
```

5. Input two numbers and print sum

```
a = int(input())
b = int(input())
print(a + b)
```

6. Print subtraction

```
a = int(input())
b = int(input())
print(a - b)
```

7. Print multiplication

```
a = int(input())
b = int(input())
print(a * b)
```

8. Print division

```
a = int(input())
b = int(input())
print(a / b)
```

9. Print message with space

```
print("Python", "Programming")
```

10. Print using f-string

```
x = 10
print(f"Value is {x}")
```

11. Print new line

```
print("Hello\nWorld")
```

12. Print tab space

```
print("Hello\tWorld")
```

13. Print square of number

```
n = int(input())
print(n * n)
```

14. Print cube of number

```
n = int(input())
print(n * n * n)
```

15. Input string and print uppercase

```
s = input()
print(s.upper())
```

16. Input string and print lowercase

```
s = input()
print(s.lower())
```

17. Print boolean value

```
print(True)
```

18. Print variable type

```
x = 5
print(type(x))
```

19. Same line output

```
print("Hello", end=" ")
print("World")
```

20. Print sum text

```
a = 3
```

```
b = 4
print("Sum is", a + b)
```

21. Print integer

```
print(100)
```

22. Print float

```
print(10.5)
```

23. Print string

```
print("Python")
```

24. Print comparison result

```
print(10 > 5)
```

25. Print multiple lines

```
print("A")
print("B")
print("C")
```

SECTION 2: DATA TYPES (26–40)

26. Integer type

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

27. Float type

```
x = 12.5
print(type(x))
```

28. String type

```
x = "Hello"
print(type(x))
```

29. Boolean type

```
x = False
print(type(x))
```

30. Convert int to float

```
x = 5
print(float(x))
```

31. Convert float to int

```
x = 9.8
print(int(x))
```

32. Convert int to string

```
x = 50
print(str(x))
```

33. Input is string

```
x = input()
print(type(x))
```

34. Arithmetic result type

```
print(type(5 + 2.5))
```

35. Boolean equality

```
print(5 == 5)
```

36. Boolean not equal

```
print(5 != 3)
```

37. Boolean greater than

```
print(7 > 2)
```

38. Division type

```
print(type(10 / 2))
```

39. Multiplication type

```
print(type(4 * 3))
```

40. None type

```
x = None
print(type(x))
```

- **SECTION 3: VARIABLES, CONSTANTS, IDENTIFIERS (41–60)**

41. Variable assignment

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

42. Multiple variables

```
a = 5
b = 6
print(a, b)
```

43. Variable reassignment

```
x = 3
x = 8
print(x)
```

44. Constant (by convention)

```
PI = 3.14
print(PI)
```

45. Valid identifier

```
student_name = "Ali"
print(student_name)
```

46. Case sensitivity

```
x = 5
X = 9
print(x, X)
```

47. Identifier with number

```
var1 = 100
print(var1)
```

48. Identifier with underscore

```
total_marks = 450
print(total_marks)
```

49. Invalid identifier example

```
# 1name = "Ali"
```

50. Keyword cannot be identifier

if = 10

51. String variable

course = "Python"

52. Float variable

price = 99.99

53. Boolean variable

status = True

54. Swap variables

a = 3

b = 4

a, b = b, a

print(a, b)

55. Print variable type

x = "Hello"

print(type(x))

56. Assign zero

x = 0

print(x)

57. Assign negative number

x = -5

print(x)

58. Assign long number

x = 100000

print(x)

59. Assign decimal

x = 0.75

print(x)

60. Assign boolean False

x = False

```
print(x)
```

◆ SECTION 4: IF / ELIF / ELSE (61–100)

61. Check positive number

```
n = int(input())
if n > 0:
    print("Positive")
```

62. Check negative number

```
n = int(input())
if n < 0:
    print("Negative")
```

63. Check zero

```
n = int(input())
if n == 0:
    print("Zero")
```

64. Even or odd

```
n = int(input())
if n % 2 == 0:
    print("Even")
else:
    print("Odd")
```

65. Greater of two numbers

```
a = int(input())
b = int(input())
if a > b:
    print(a)
else:
    print(b)
```

66. Voting eligibility

```
age = int(input())
if age >= 18:
    print("Eligible")
else:
    print("Not Eligible")
```

67. Pass or fail

```
marks = int(input())
if marks >= 40:
    print("Pass")
else:
    print("Fail")
```

68. Largest of three numbers

```
a = int(input())
b = int(input())
c = int(input())
if a > b and a > c:
    print(a)
elif b > c:
    print(b)
else:
    print(c)
```

69. Grade system

```
m = int(input())
if m >= 90:
    print("A")
elif m >= 75:
    print("B")
elif m >= 60:
    print("C")
```

```
else:
    print("Fail")
```

70. Leap year

```
y = int(input())
if y % 4 == 0:
    print("Leap Year")
else:
    print("Not Leap Year")
```

71. Divisible by 5

```
n = int(input())
if n % 5 == 0:
    print("Divisible by 5")
```

72. Divisible by 3 and 5

```
n = int(input())
if n % 3 == 0 and n % 5 == 0:
    print("Divisible by both")
```

73. Temperature check

```
t = int(input())
if t > 30:
    print("Hot")
else:
    print("Normal")
```

74. Password check

```
p = input()
if p == "admin":
    print("Login Success")
else:
    print("Wrong Password")
```

75. String comparison

```
a = input()
b = input()
if a == b:
    print("Same")
else:
    print("Different")
```

76. Positive even number

```
n = int(input())
if n > 0 and n % 2 == 0:
    print("Positive Even")
```

77. Check greater than 100

```
n = int(input())
if n > 100:
    print("Greater than 100")
```

78. Check less than 50

```
n = int(input())
if n < 50:
    print("Less than 50")
```

79. Compare with 10

```
n = int(input())
if n == 10:
    print("Equal to 10")
else:
    print("Not equal to 10")
```

80. Simple calculator

```
a = int(input())
b = int(input())
op = input()
if op == "+":
```

```
    print(a + b)
elif op == "-":
    print(a - b)
elif op == "*":
    print(a * b)
elif op == "/":
    print(a / b)
else:
    print("Invalid Operator")
```