UNIT - 1

1. Find the Largest Among Three Numbers

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

b = int(input("Enter second number:"))

c = int(input("Enter third number:"))


if a >= b and a >= c:

  print("Largest number is:", a)

elif b >= a and b >= c:

  print("Largest number is:", b)

else:

  print("Largest number is:", c)
```

Sample Input:

12, 25, 18

Output:

Largest number is: 25

2. Display All Prime Numbers in an Interval

```
start = int(input("Enter start of interval:"))

end = int(input("Enter end of interval:"))


print("Prime numbers between", start, "and", end, "are:")

for num in range(start, end + 1):
```

if num > 1:

for i in range(2, num):

if num % i == 0:

break

else:

print(num, end=" ")

Sample Input:

10 to 25

Output:

Prime numbers between 10 and 25 are:

11 13 17 19 23

3. Swap Two Numbers Without a Temporary Variable

x = int(input("\nEnter first number:"))

y = int(input("Enter second number:"))

x = x + y

y = x - y

x = x - y

print(“After swapping:”)

print(“x =”, x)

print(“y =”, y)

Sample Input:

x = 5, y = 9

Output:

After swapping:

x = 9

y = 5

4. Python Operators Demonstration

a = 10

b = 3

list1 = [1, 2, 3]

x = [10]

y = [10]

 # Arithmetic

print(“Addition:”, a + b)

print(“Subtraction:”, a - b)

```
print("Multiplication:", a * b)

print("Division:", a / b)

print("Modulus:", a % b)

print("Exponent:", a ** b)

print("Floor Division:", a // b)


# Relational

print("a == b:", a == b)

print("a != b:", a != b)

print("a > b:", a > b)

print("a < b:", a < b)


# Assignment

c = a

c = c + b

print("c = c + b:", c)


# Logical

print("a > 5 and b < 5:", a > 5 and b < 5)

print("not (a > b):", not (a > b))
```

 # Bitwise

print(“a & b:”, a & b)

print(“a | b:”, a | b)

print(“a ^ b:”, a ^ b)

print(“~a:”, ~a)

print(“a « 1:”, a « 1)

print(“a » 1:”, a » 1)

 # Ternary

if a > b:

max_val = a

else:

max_val = b

print(“Max value:”, max_val)

Output:

Addition: 13

Subtraction: 7

Multiplication: 30

Division: 3.3333333333333335

Modulus: 1

Exponent: 1000

Floor Division: 3

a == b: False

a != b: True

a > b: True

a < b: False

c = c + b: 13

a > 5 and b < 5: True

not (a > b): False

a & b: 2

a | b: 11

a ^ b: 9

~a: -11

a « 1: 20

a » 1: 5

Max value: 10

5. Add and Multiply Complex Numbers

```
x = complex(input("Enter first complex number:"))

y = complex(input("Enter second complex number:"))


print("Sum:", x + y)

print("Product:", x * y)
```

Sample Input:

x = 3+2j, y = 1+4j

Output:

Sum: (4+6j)

Product: (-5+14j)

6. Multiplication Table (Updated Code)

Method 1:

```
num = int(input("\nEnter number for multiplication table:"))

for i in range(1, 11):

  print(num, "x", i, "=", num * i)
```

Method 2:

num = int(input("\nEnter number for multiplication table:"))

for i in range(1, 11):

print(f"{num} x {i} = {num * i}") """ The f tells Python to evaluate expressions inside curly braces {} within the string.

It replaces {num}, {i}, and {num * i} with their actual values at runtime. """

Sample Input:

num = 5

Output:

5 x 1 = 5

5 x 2 = 10

5 x 3 = 15

5 x 4 = 20

5 x 5 = 25

5 x 6 = 30

5 x 7 = 35

5 x 8 = 40

5 x 9 = 45

5 x 10 = 50