**Group 1**

**Variables**

1. Create two variables a=12, b=4. Print their sum, difference, product, and quotient.
2. Convert the string "1234" into an integer and add 66 to it.
3. Ask the user to enter a number. If it is even, print "Even", otherwise print "Odd".
4. Use a for loop to print numbers from 1 to 10.
5. Use a while loop to calculate the sum of numbers from 1 to 50.
6. Write a function that returns the factorial of a given number.
7. Given a list [2, 4, 6, 8], append 10, remove 4, and print the result.
8. Create a dictionary {"name": "John", "age": 22}. Add "major": "CS" and print it.

**Group 2**

**Data Types**

1. Assign x=15, y=5. Find x\*\*y and x%y.
2. Convert a float 45.67 to string and print its length.
3. Ask the user for age. If age ≥ 18 print "Adult", else print "Minor".
4. Use a for loop to print the multiplication table of 7.
5. Use a while loop to print numbers from 100 down to 90.
6. Write a function that takes two numbers and returns their average.
7. Create a list of fruits: ["apple","banana","orange"]. Replace "banana" with "pear".
8. Create a dictionary with 3 countries and their capitals. Print the capital of "Japan".

**Group 3**

**Operators**

1. Create p=9, q=2. Find (p+q)\*(p-q).
2. Change "56" (string) into an integer and multiply it by 4.
3. Ask the user for a number. If it’s divisible by 5, print "Multiple of 5", else "Not multiple".
4. Use a for loop to print squares of numbers from 1 to 5.
5. Use a while loop to print all even numbers ≤ 20.
6. Write a function that returns the maximum of three numbers.
7. Given a tuple (1,2,3,4), convert it into a list and add 5.
8. Create a dictionary {"x":10,"y":20}. Increase each value by 5.

**Group 4**

**Conditional Statements (if, else)**

1. Declare m=20, n=3. Print m//n and m\*\*n.
2. Take the float 99.9, convert it to integer.
3. Ask the user for a temperature. If ≥ 30 print "Hot", else "Cool".
4. Use a for loop to print the first 10 natural numbers in reverse order.
5. Use a while loop to print factorial of 5.
6. Write a function that checks if a number is prime.
7. Given list [10,20,30,40], insert 25 between 20 and 30.
8. Create a dictionary of student info with "name","id","grade". Print the grade.

**Group 5**

**Loops (for, while)**

1. Let a=100, b=45. Find remainder and quotient of division.
2. Convert boolean True to integer and add 7.
3. Ask user for a number. If number < 0 print "Negative", if 0 print "Zero", else "Positive".
4. Use a for loop to print only odd numbers from 1 to 15.
5. Use a while loop to print sum of even numbers from 2 to 20.
6. Write a function that takes a list and returns its length.
7. Create a list [1,2,3]. Duplicate it using \*2.
8. Create a dictionary with 5 English words and their Uzbek translations. Print one translation.

**Group 6**

**Functions**

1. Declare x=5, y=12. Print (x\*y) + (y-x).
2. Convert integer 2025 into string and find its first character.
3. Ask user to input two numbers. Print the bigger one.
4. Use a for loop to calculate the sum of numbers 1–10.
5. Use a while loop to print countdown from 10 to 1.
6. Write a function that reverses a string.
7. Create a tuple with 4 elements, unpack them into separate variables.
8. Create dictionary {"math":90, "english":85}. Add "science":95.

**Group 7**

**List, Tuple, Dictionary**

1. Let p=11, q=3. Compute p//q and p%q.
2. Convert float 12.34 to string and print type.
3. Ask user for password. If it equals "admin123" print "Access Granted", else "Denied".
4. Use a for loop to print first 5 Fibonacci numbers.
5. Use a while loop to keep asking user for a number until they enter 0.
6. Write a function that returns the square of a number.
7. Create a list of 5 numbers and print the maximum element.
8. Create a dictionary with car brands as keys and their countries as values. Print Germany’s brand.

**Group 8**

**Libraries**

1. Create variables x=3.5, y=2. Print x\*\*y and round to 2 decimals.
2. Convert "True" string into a boolean.
3. Ask user for a grade. If ≥ 90 print "A", if ≥ 80 print "B", else "C".
4. Use a for loop to print numbers divisible by 3 from 1–30.
5. Use a while loop to calculate product of numbers 1–5.
6. Write a function that checks whether a string is palindrome.
7. Create a list ["red","blue","green"]. Replace "green" with "yellow".
8. Make a dictionary {"apple":2,"banana":3}. Increase "banana" value by 2.

**Group 9**

**Functions**

1. Create variables a=50, b=9. Print the result of a//b, a%b, and a/b.
2. Convert integer 123 into float and print its type.
3. Ask user to enter a number. If it is divisible by both 2 and 3, print "Divisible by 2 and 3", otherwise "Not divisible".
4. Use a for loop to print the cube of numbers from 1 to 5.
5. Use a while loop to print numbers from 1 to 10, but skip 5.
6. Write a function that takes a list of numbers and returns the sum of only even numbers.
7. Create a list [10,20,30,40,50]. Slice the list to get only [20,30,40].
8. Create a dictionary {"name":"Sara","age":19,"city":"Seoul"}. Change "city" to "Busan".