Assignment 1

Basic Java programs (uses of variables, data types, conditional statements)

1. Write a java program to calculate the sum of two integer numbers.
2. Write a java program to convert temperature from Celsius to Fahrenheit.
3. Write a java program to find area and perimeter of a rectangle.
4. Write a java program to find the grade of total marks entered by an user using the following table.

Marks	Grade
95-100	O
85-94	A+
75-84	A
60-74	B
50-59	C
40-49	D
<40	F

5. Write a java program to find the largest among four numbers using ternary operator.

Assignment 2

Use of loop, Array, methods, console input, etc.

1. Write a java program to find the total sum of all array elements.
2. Write a java program to search a specific element in an array.
3. Write a java program to print the maximum between right diagonal and left diagonal sum of a square matrix.
4. Write a java program to print the following pattern
   1
   2 4
   3 9 27
   4 16 64 256

5. Write a java program to take two strings as input through console and concatenate them to print the final output.
6. Write a java program to create four functions to calculate addition, subtraction, multiplication and division of two numbers inputted through console and print the values through the display function.

Assignment 3

Use of class, inheritance, package, interface etc.

1. Write a java program to create a class calculator to do addition, subtraction, and multiplication of **N** numbers inputted by the user.
2. Write a java program to Create a package Banking under this create a class BankAccount having minimum balance, account holder name, etc. as member variables with interest rate as member function. You may add more functions if required. Now create two child classes SavingsAccount and FixedDepositAccount of the BankAccount class. Interest rate of SavingsAccount and FixedDepositAccount should be different. Now in main create atleast one SavingsAccount and one FixedDepositAccount of yours. Add money to those accounts; calculate the interest of these accounts after five years; also credit and debit money from the SavingsAccount with some transactions.
3. Write a java program to Create an interface specialArithmatic with the function all_devisors(int n) which will take an integer as input. Now implement this interface in a class which will return all the divisors of the inputted integer value. In main call the class object to print all the divisors from main.

Assignment 4

Use of Exception handling

1. Write a java program to handle divide by zero, array index out of bound and null pointer exception in a same class with different try catch.
2. Write a java program to handle null pointer and array index out of bound exception in a same class with nested try catch.
3. Write a java program to create your own exception that has the ability to handle even number exception and exception of having values inserted greater than 2000.

Assignment 5

Multi-Threading and File handling

1. Write a java program to solve a producer consumer problem where the producer will produce a string and consumer will consume that string to make that string null string.
2. Write a java program to create your own copy file program where in command line two file names will be passed as input. The program will copy the content of one file into another with a suitable message to the user.