Unit I: Collections Streams, and Filters

1. ArrayList with Stream API Operations

- Write a program to create an ArrayList with N integers taken as input at runtime.
    - Use Stream API to:
        - Print all integers of the ArrayList in descending order.
        - Find the sum of squares of all the odd numbers present in the ArrayList using `reduce()`.

2. Student Class with Stream API Operations

- Write a program to create a class `Student` with attributes name, roll_number, and CGPA. Create at least 5 student objects and store them in an ArrayList. Use Stream API to print the details of all students having CGPA less than 6 in descending order.

Unit II: GUI and Event Handling

1. GUI for Account Details Display

- Write a program to design a GUI which reads the account number using a text field and displays all details of that account in a JTable fetching from the database.
    - Columns: Account Holder Name, Branch Name, and Balance.

2. Unit Converter using Swing API

- Write a program using Swing API to design a unit converter. Provide a `JComboBox` to select the unit of input type (centimetre/metre), a text field to read the value to be converted, and display the result in a non-editable field in feet.

3. Paint Application using Graphics Class

- Write a program to design a paint application where you provide a combo box to select the shape (rectangle, oval, line) and a text field to read 4 space-separated integers (4 parameters to draw the shapes). Draw the shape when the “draw” button is pressed. (Use `Graphics` class)

Unit III: File I/O (NIO.2) and Database Applications with JDBC

1. Update CGPA using JDBC

- Write a program to update the CGPA of a student in the table using JDBC. Read the registration number and updated CGPA, and update the CGPA in the student table. If the registration number is not found in the table, then ask the user to re-enter the registration number and update.

2. Directory Listing

- Write a program to read the path of a directory from the user and print the names of all the files and subdirectories present in that directory separately, such that all the file names are printed first, followed by all the directory names.

3. Print Table Data using ResultSetMetadata in JDBC

- Write a program that reads the table name from the user at runtime and prints all the data of the table using the `ResultSetMetadata` in JDBC.

Unit IV: JSP

1. JSP Application for Sports Registration

- Write a program to create a JSP application for sport registration. Provide the registration page with appropriate components for name, sports, and gender. When the register button is pressed, show the registration successful message on the next page with a unique registration ID and the current date and time.