

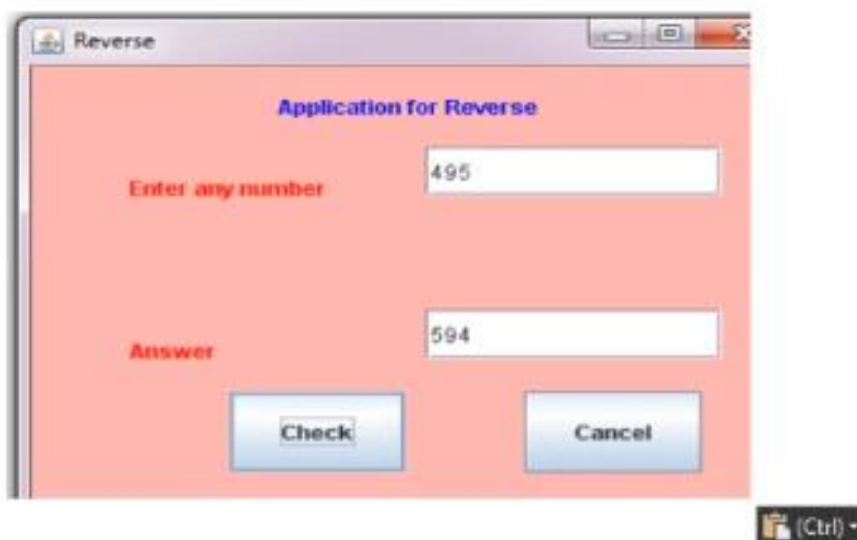
Unit 1

- 1) Explain the merits and demerits of OOPs.
- 2) Differentiate between object-oriented programming and procedural oriented programming language.
- 3) Write a program to display following pattern:

```
1 2 3 4 5
1 2 3 4
1 2 3
1 2
1
```
- 4) List the 5 basic datatypes used in java with examples.
- 5) Briefly elaborate inheritance and its types. Explain any 1 type with appropriate example.
- 6) Briefly explain about basic concepts of object-oriented programming language.
- 7) Write a java program to display factors of an entered number.
- 8) Write about various decision-making statements available in java (if, if-else, nested if-else, switch) explain one with example.

UNIT 2

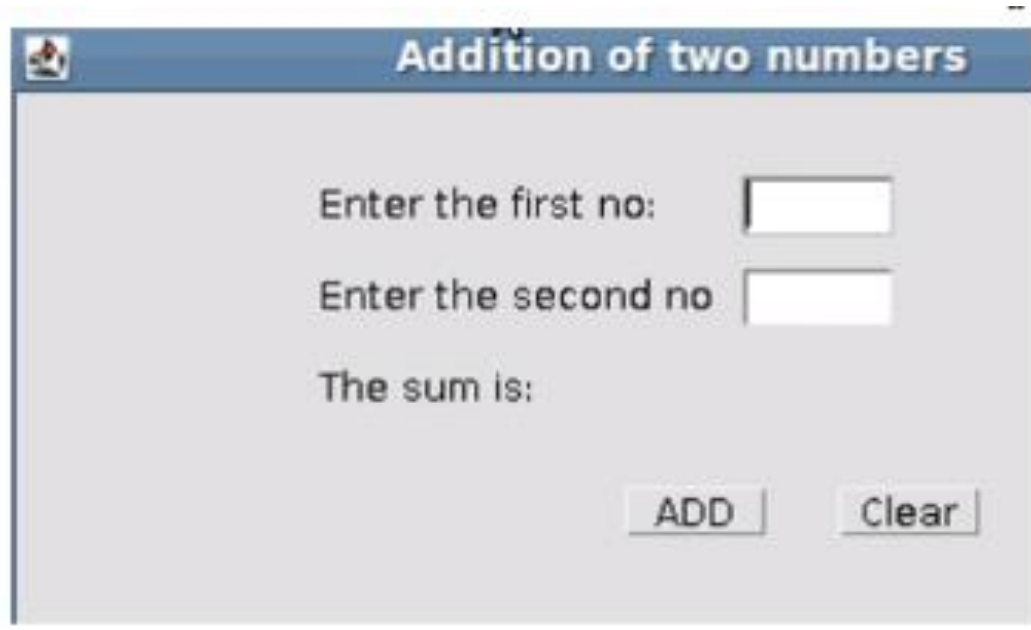
- 1) Write a program to ask user to enter a number and display reverse of entered number. Eg 53 -> 35
- 2) Write a swing code for following application



(can also be asked as palindrome / angstrom)

- 3) Write a java program to generate multiplication table of number entered by user
- 4) Write a swing code to create application for student (first name, last name, address, email id, submit, clear)
- 5) Write a java program to check whether a number is palindrome or not
- 6) Explain the concept of overriding with an example

- 7) What is class? Explain how to access class member function with examples
- 8) What is method overloading? Write a java program to find the area of triangle, square and circle using overloading concept
- 9) What is interface? explain forms of implementing interfaces with example
- 10) Write about various looping control statements available in java
- 11) Describe the concept of array in detail
- 12) Explain packages in detail
- 13) Write a swing code for the following application:



The image shows a Java Swing window titled "Addition of two numbers". The window has a light gray background and a blue title bar. Inside the window, there are two text input fields for numbers, a label "The sum is:", and two buttons labeled "ADD" and "Clear".

(can be subtraction, multiplication, division)

UNIT3

- 1) Develop a JDBC application for login using swing component, if user clicks on login button it should display message as: login successfully, else invalid username or password.
- 2) Explain steps for JDBC connection
- 3) Draw architecture of client server application in JDBC
- 4) Write a java program to retrieve values from swing component or swing form and store in database using JDBC

NAME

PASSWORD

SELECT COUNTRY

GENDER ☐ MALE ☐ FEMALE

If user clicks on submit button. All the data should be inserted into a database

- 5) Explain different types of JDBC drivers
- 6) Explain difference between type 1 and type 3 driver
- 7) Explain difference between type 3 and type 4 driver
- 8) What are symbols? Explain symbols with syntax and examples
- 9) Write a program to translate DNA to protein sequence using BioJava
- 10) Explain sequence and symbol list with one example
- 11) Write a program to reverse compliment of sequence using BioJava
- 12) What is point location. Explain it with example
- 13) Write a program to convert DNA to RNA sequence using BioJava
- 14) What is sequence? Explain sequence with syntax and example
- 15) Explain FASTA file in detail with program
- 16) What is location? Explain any two types of location