## **Programming Assignment 2**

## 1. Printing Strings:

- Write a program that prints a string variable containing your favorite quote.
- 2. Accessing Characters in Strings:
  - Create a program that prompts the user for their name and then prints the first and last characters of the name.
- 3. Cleaning Strings:
  - Design a program that takes a user-input string and removes any leading or trailing whitespaces.
- 4. Encoding and Escaping:
  - Write a program that encodes a given string using Base64 encoding.
- 5. Comparing Strings:
  - Develop a program that compares two strings and prints whether they are equal or not.
- 6. Manipulating and Searching Strings:
  - Implement a program that takes a sentence as input and replaces all occurrences of a specified word with another word.
- 7. Regular Expressions:
  - Create a program that uses regular expressions to validate if a given string is a valid email address.
- 8. Indexed vs. Associative Arrays:
  - Explain the difference between indexed and associative arrays in a programming language of your choice.
- 9. Defining Arrays:
  - Write a program that defines an array of integers and prints each element on a new line.
- 10.Storing Data in Array:
- Develop a program that asks the user to input five names and stores them in an array. 11.Multidimensional Array:
- Create a program that uses a 2D array to represent a multiplication table up to 10x10. 12.Extracting Multiple Values:
  - Write a program that extracts even numbers from an array of integers and stores them in a new array.
- 13. Conversion between Array and Variables:
  - Design a program that converts a string of comma-separated numbers into an array of integers.
- 14. Traversing Arrays:
  - Implement a program that calculates the sum of all elements in an array.