Assignment_02 String Methods

Conceptual Questions:

1. What is string concatenation, and how can you concatenate two strings in Python?
2. Explain string indexing and negative indexing with an example.
3. How do you extract a substring using slicing in Python?
4. What is the difference between upper(), lower(), swapcase(), capitalize(), and title() methods?
5. How does the strip() method work? What is the difference between lstrip() and rstrip()?
6. How do you count the number of occurrences of a specific character or substring in a string?
7. What is the difference between find() and index() methods?
8. Explain how startswith() and endswith() methods work.
9. How can you reverse a string in Python?
10. What is the difference between isalpha(), isdigit(), isalnum(), and isspace() methods?

Coding Questions:

11. Write a program to check if a given string is a palindrome.
12. Write a Python function to count the occurrences of each character in a string.
13. Write a Python program to find and replace all occurrences of a given substring in a string.
14. Write a function that removes all vowels from a given string.
15. Write a Python program to check if two strings are anagrams of each other.
16. Write a function to capitalize the first letter of each word in a string (without using title()).
17. Write a Python program to remove duplicate characters from a string.
18. Write a Python function to check if a given string contains only digits without using isdigit().

19. Write a function to count the number of words in a string.
20. Write a program to check if a string contains any special characters (excluding spaces).