1. Write a program that takes a string input from the user and

A. prints the reverse of that string.

```java
import java.util.Scanner;

public class ReverseString {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a string: ");

String input = scanner.nextLine();

scanner.close();

String reversed = reverseString(input);

System.out.println("Reversed string: " + reversed);

}

public static String reverseString(String str) {

String reversed = "";

for (int i = str.length() - 1; i >= 0; i--) {

reversed += str.charAt(i);

}

return reversed;

}

}
```

Output:

Enter a string: Hello, World!

Reversed string: !dlroW ,olleH

2.Write a program that counts the number of vowels and consonants in a given string.?

A.
```java
import java.util.Scanner;

public class VowelConsonantCounter {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a string: ");

String input = scanner.nextLine();
```

```java
scanner.close();

int vowelCount = 0;

int consonantCount = 0;

input = input.toLowerCase();

for (int i = 0; i < input.length(); i++) {

char ch = input.charAt(i);

if (ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u') {

vowelCount++;

}

else if (ch >= 'a' && ch <= 'z') {

consonantCount++;

}

}

System.out.println("Number of vowels: " + vowelCount);

System.out.println("Number of consonants: " + consonantCount);

}

}
```

3. Write a program to check if the given string is a palindrome.

A.

```python
def is_palindrome(s):

    s = s.replace(" ", "").lower()

    return s == s[::-1]

input_string = input("Enter a string to check if it's a palindrome: ")

if is_palindrome(input_string):

    print(f'"{input_string}" is a palindrome.')

else:

    print(f'"{input_string}" is not a palindrome.')
```

4. Write a program to find the length of a string without using the

built-in `length()` method.

A.

```python
def find_length(s):
    count = 0
    for char in s:
        count += 1
    return count

input_string = input("Enter a string to find its length: ")
length_of_string = find_length(input_string)
print(f'The length of the string "{input_string}" is {length_of_string}.')
```

5. Write a program to count the number of words in a string.

A.

```python
def count_words(s):
    words = s.split()
    return len(words)

input_string = input("Enter a string to count its words: ")
number_of_words = count_words(input_string)
print(f'The number of words in the string is: {number_of_words}')
```

6. Write a program that concatenates two strings without using the `concat()` method.

A.

```python
def concatenate_strings(s1, s2):
    result = ""
    for char in s1:
        result += char
    for char in s2:
        result += char
    return result

string1 = input("Enter the first string: ")
string2 = input("Enter the second string: ")
concatenated_string = concatenate_strings(string1, string2)
print(f'The concatenated string is: "{concatenated_string}"')
```

7. Write a program to check if a substring is present in a given

string.

A.

```python
def is_substring_present(main_string, sub_string):
    len_main = len(main_string)
    len_sub = len(sub_string)
    for i in range(len_main - len_sub + 1):
        if main_string[i:i + len_sub] == sub_string:
            return True
    return False
main_string = input("Enter the main string: ")
sub_string = input("Enter the substring to check: ")
if is_substring_present(main_string, sub_string):
    print(f'The substring "{sub_string}" is present in the main string.')
else:
    print(f'The substring "{sub_string}" is not present in the main string.')
```

8. Write a program to remove all the whitespace from a given string.

A.

```python
def remove_whitespace(s):
    result = ""
    for char in s:
        if not char.isspace():
            result += char
    return result
input_string = input("Enter a string to remove its whitespace: ")
string_without_whitespace = remove_whitespace(input_string)
print(f'The string without whitespace is: "{string_without_whitespace}"')
```

9. Write a program to replace a specific character in a string with another character.

A.

```python
def replace_character(s, old_char, new_char):
```

```python
        result = ""
    for char in s:
        if char == old_char:
            result += new_char
        else:
            result += char

input_string = input("Enter the string: ")
old_character = input("Enter the character to be replaced: ")
new_character = input("Enter the new character: ")
modified_string = replace_character(input_string, old_character, new_character)
print(f'The modified string is: "{modified_string}"')
```

10. Write a program that converts a string to uppercase and another

that converts it to lowercase.

A.

```python
def to_uppercase(s):
    result = ""
    for char in s:
        if 'a' <= char <= 'z':
            result += chr(ord(char) - ord('a') + ord('A'))
        else:
            result += char
    return result

input_string = input("Enter a string to convert to uppercase: ")
uppercase_string = to_uppercase(input_string)
print(f'The string in uppercase is: "{uppercase_string}"')
```