**Day 5**

1. Write a program to find the length of a string without using strlen().

#include <stdio.h>

int main() {

char str[100];

int i = 0;

printf("Enter a string: ");

gets(str);

while (str[i] != '\0') i++;

printf("Length = %d", i);

return 0;

}

2. Write a program to copy one string to another.

#include <stdio.h>

int main() {

char str1[100], str2[100];

int i;

printf("Enter a string: ");

gets(str1);

for (i = 0; str1[i] != '\0'; i++)

str2[i] = str1[i];

str2[i] = '\0';

printf("Copied string: %s", str2);

return 0;

}

3. Write a program to concatenate two strings.

#include <stdio.h>

int main() {

char str1[100], str2[50];

int i = 0, j = 0;

printf("Enter first string: ");

gets(str1);

printf("Enter second string: ");

gets(str2);

while (str1[i] != '\0') i++;

while (str2[j] != '\0') str1[i++] = str2[j++];

str1[i] = '\0';

printf("Concatenated string: %s", str1);

return 0;

}

4. Write a program to compare two strings.

#include <stdio.h>

int main() {

char str1[100], str2[100];

int i, flag = 0;

printf("Enter two strings: ");

gets(str1); gets(str2);

for (i = 0; str1[i] != '\0' || str2[i] != '\0'; i++) {

if (str1[i] != str2[i]) {

flag = 1;

break;

}

}

if (flag) printf("Strings are not equal");

else printf("Strings are equal");

return 0;

}

5. Write a program to count vowels and consonants in a string.

#include <stdio.h>

int main() {

char str[100];

int i, vowels = 0, consonants = 0;

printf("Enter a string: ");

gets(str);

for (i = 0; str[i] != '\0'; i++) {

char ch = tolower(str[i]);

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

if (ch == 'a'||ch == 'e'||ch == 'i'||ch == 'o'||ch == 'u') vowels++;

else consonants++;

}

}

printf("Vowels = %d, Consonants = %d", vowels, consonants);

return 0;

}

6. Write a program to convert lowercase to uppercase and vice versa.

#include <stdio.h>

int main() {

char str[100];

int i;

printf("Enter a string: ");

gets(str);

for (i = 0; str[i] != '\0'; i++) {

if (str[i] >= 'A' && str[i] <= 'Z')

str[i] = str[i] + 32;

else if (str[i] >= 'a' && str[i] <= 'z')

str[i] = str[i] - 32;

}

printf("Converted string: %s", str);

return 0;

}

7. Write a program to check if a string is a palindrome.

#include <stdio.h>

#include <string.h>

int main() {

char str[100];

int i, len, flag = 0;

printf("Enter a string: ");

gets(str);

len = strlen(str);

for (i = 0; i < len / 2; i++) {

if (str[i] != str[len - i - 1]) {

flag = 1;

break;

}

}

if (flag) printf("Not a palindrome");

else printf("Palindrome");

return 0;

}

8. Write a program to reverse a string.

#include <stdio.h>

#include <string.h>

int main() {

char str[100];

int i, len;

printf("Enter a string: ");

gets(str);

len = strlen(str);

printf("Reversed string: ");

for (i = len - 1; i >= 0; i--)

putchar(str[i]);

return 0;

}

9. Write a program to count words in a string.

#include <stdio.h>

int main() {

char str[200];

int i, words = 1;

printf("Enter a string: ");

gets(str);

for (i = 0; str[i] != '\0'; i++) {

if (str[i] == ' ' && str[i+1] != ' ' && str[i+1] != '\0')

words++;

}

printf("Number of words = %d", words);

return 0;

}

10. Write a program to find the frequency of each character in a string.

#include <stdio.h>

#include <string.h>

int main() {

char str[100];

int freq[256] = {0}, i;

printf("Enter a string: ");

gets(str);

for (i = 0; str[i] != '\0'; i++)

freq[(unsigned char)str[i]]++;

for (i = 0; i < 256; i++)

if (freq[i] != 0)

printf("'%c' = %d\n", i, freq[i]);

return 0;

}