Qa

```
// Implement mystrcpy() (String Copy)
#include<stdio.h>
void mystrcpy(char *dest, const char *src) {
   while((*dest++ = *src++));
}
int main() {
   char str1[100], str2[100];
   printf("Enter a string: ");
   scanf("%s", str1);
   mystrcpy(str2, str1);
   printf("Copied String: %s\n", str2);
   return 0;
}
```

Qb

```
// Implement mystrlen() (String Length)
#include<stdio.h>
int mystrlen(const char *str) {
   int len = 0;
   while(str[len] != '\0') len++;
   return len;
}
int main() {
   char str[100];
   printf("Enter a string: ");
   scanf("%s", str);
   printf("Length: %d\n", mystrlen(str));
   return 0;
}
```

Qc

```
// Implement mystrcmp() (String Compare)
#include<stdio.h>
int mystrcmp(const char *s1, const char *s2) {
   while(*s1 && (*s1 == *s2)) {
      s1++; s2++;
   }
   return *(unsigned char *)s1 - *(unsigned char *)s2;
}
int main() {
   char str1[100], str2[100];
   printf("Enter first string: ");
   scanf("%s", str1);
   printf("Enter second string: ");
   scanf("%s", str2);
   printf("Comparison result: %d\n", mystrcmp(str1, str2));
   return 0;
}
```

Qd

```
// Implement mystrcat() (String Concatenation)
#include<stdio.h>
void mystrcat(char *dest, const char *src) {
   while(*dest) dest++;
   while((*dest++ = *src++));
}
int main() {
   char str1[100], str2[100];
   printf("Enter first string: ");
   scanf("%s", str1);
   printf("Enter second string: ");
   scanf("%s", str2);
   mystrcat(str1, str2);
```

```
    printf("Concatenated String: %s\n", str1);
    return 0;
}
```

Qe

```
// Reverse a String
#include<stdio.h>
#include<string.h>
int main() {
    char str[100];
    printf("Enter a string: ");
    scanf("%s", str);
    strrev(str);
    printf("Reversed String: %s\n", str);
    return 0;
}
```

Qf

```
// Convert String to Uppercase
#include<stdio.h>
#include<string.h>
int main() {
    char str[100];
    printf("Enter a string: ");
    scanf("%s", str);
    printf("Uppercase String: %s\n", strupr(str));
    return 0;
}
```

Qg

```
// Convert String to Lowercase
#include<stdio.h>
```

```
#include<string.h>
int main() {
   char str[100];
   printf("Enter a string: ");
   scanf("%s", str);
   printf("Lowercase String: %s\n", strlwr(str));
   return 0;
}
```

Qh

```
// Count Number of Words in a String
#include<stdio.h>
#include<string.h>
int main() {
   char str[200];
   int count = 1;
   printf("Enter a string: ");
   scanf(" %[^"]", str);
   for (int i = 0; str[i] != '\0'; i++) {
      if (str[i] == ' ' && str[i + 1] != ' ' && str[i + 1] != '\0') {
         count++;
      }
   }
   printf("Number of words: %d\n", count);
   return 0;
}
```

Qi

```
// Check if a String is Palindrome
#include<stdio.h>
#include<string.h>
int main() {
```

```
    char str[100], rev[100];
    printf("Enter a string: ");
    scanf("%s", str);
    strcpy(rev, str);
    strrev(rev);
    if(strcmp(str, rev) == 0) {
        printf("Palindrome\n");
    } else {
        printf("Not a Palindrome\n");
    }
    return 0;
}
```

Qj

```
// Remove Vowels from a String
#include<stdio.h>
#include<string.h>
int main() {
    char str[100], result[100];
    int j = 0;
    printf("Enter a string: ");
    scanf("%s", str);
    for(int i = 0; str[i] != '\0'; i++) {
        if(!strchr("aeiouAEIOU", str[i])) {
            result[j++] = str[i];
        }
    }
    result[j] = '\0';
    printf("String without vowels: %s\n", result);
    return 0;
}
```

Qk

```
// Count the Occurrences of a Character in a String
#include<stdio.h>
#include<string.h>
int main() {
   char str[100], ch;
   int count = 0;
   printf("Enter a string: ");
   scanf("%s", str);
   printf("Enter a character: ");
   scanf(" %c", &ch);
   for(int i = 0; str[i] != '\0'; i++) {
      if(str[i] == ch) count++;
   }
   printf("Occurrences of '%c': %d\n", ch, count);
   return 0;
}
```

Ql

```
// Replace Spaces with Underscores
#include<stdio.h>
#include<string.h>
int main() {
   char str[100];
   printf("Enter a string: ");
   scanf(" %[^"]", str);
   for(int i = 0; str[i] != '\0'; i++) {
      if(str[i] == ' ') {
         str[i] = '_';
      }
   }
   printf("Updated String: %s\n", str);
```

```
    return 0;
}
```

Qm

```
// Convert String to Title Case
#include<stdio.h>
#include<string.h>
#include<ctype.h>
int main() {
    char str[100];
    printf("Enter a string: ");
    scanf(" %[^"]", str);
    str[0] = toupper(str[0]);
    for(int i = 1; str[i] != '\0'; i++) {
        if(str[i-1] == ' ') {
            str[i] = toupper(str[i]);
        }
    }
    printf("Title Case: %s\n", str);
    return 0;
}
```

Qn

```
// Remove Duplicate Characters from a String
#include<stdio.h>
#include<string.h>
int main() {
    char str[100];
    int hash[256] = {0};
    int j = 0;
    printf("Enter a string: ");
    scanf("%s", str);
```

```
    for(int i = 0; str[i] != '\0'; i++) {
        if(hash[(int)str[i]] == 0) {
            hash[(int)str[i]] = 1;
            str[j++] = str[i];
        }
    }
    str[j] = '\0';
    printf("String without duplicates: %s\n", str);
    return 0;
}
```

Qo

// Find the First Non-Repeating Character in a String

```
#include<stdio.h>
#include<string.h>
int main() {
    char str[100];
    int freq[256] = {0};
    printf("Enter a string: ");
    scanf("%s", str);
    for(int i = 0; str[i] != '\0'; i++) {
        freq[(int)str[i]]++;
    }
    for(int i = 0; str[i] != '\0'; i++) {
        if(freq[(int)str[i]] == 1) {
            printf("First non-repeating character: %c\n", str[i]);
            return 0;
        }
    }
    printf("No non-repeating character found.\n");
    return 0;
}
```

Qp

```
// Find the Most Frequent Character in a String
#include<stdio.h>
#include<string.h>
int main() {
   char str[100];
   int freq[256] = {0}, maxFreq = 0;
   char maxChar;
   printf("Enter a string: ");
   scanf("%s", str);
   for(int i = 0; str[i] != '\0'; i++) {
      freq[(int)str[i]]++;
      if(freq[(int)str[i]] > maxFreq) {
         maxFreq = freq[(int)str[i]];
         maxChar = str[i];
      }
   }
   printf("Most frequent character: %c (appears %d times)\n", maxChar, maxFreq);
   return 0;
}
```