```
#include <stdio.h>
#include <string.h>
void encrypt(char msg[]) {
   char rail1[100], rail2[100];
   int len = strlen(msg), r1 = 0, r2 = 0;
   for (int i = 0; i < len; i++) {
      if (i % 2 == 0)
         rail1[r1++] = msg[i];
      else
         rail2[r2++] = msg[i];
   }
   rail1[r1] = '\0';
   rail2[r2] = '\0';
   printf("Encrypted: %s%s\n", rail1, rail2);
}
void decrypt(char msg[]) {
   int len = strlen(msg);
   char plain[100];
   int mid = (len + 1) / 2;
   int i = 0, j = mid, k = 0;
   while (i < mid || j < len) {
      if (i < mid) plain[k++] = msg[i++];
      if (j < len) plain[k++] = msg[j++];
   }
   plain[len] = '\0';
   printf("Decrypted: %s\n", plain);
}
int main() {
   char msg[100];
   int choice;
   printf("1. Encrypt\n2. Decrypt\nChoice: ");
```

```
scanf("%d", &choice);
    getchar();  // clear newline
    printf("Enter message: ");
    fgets(msg, sizeof(msg), stdin);
    msg[strcspn(msg, "\n")] = '\0';
    if (choice == 1)
        encrypt(msg);
    else if (choice == 2)
        decrypt(msg);
    else
        printf("Invalid choice.\n");
    return 0;
}
```

Output

```
1. Encrypt
2. Decrypt
Choice: 1
Enter message: sumanth
Encrypted: smnhuat


=== Code Execution Successful ===
```