

```
#include <stdio.h>
#include <string.h>
#include <ctype.h>

int main() {
    char text[100], key[100], cipher[100];
    int i, j = 0;

    printf("Enter plaintext: ");
    fgets(text, sizeof(text), stdin);

    printf("Enter key: ");
    fgets(key, sizeof(key), stdin);

    key[strcspn(key, "\n")] = '\0';

    for (i = 0; text[i] != '\0'; i++) {
        if (isalpha(text[i])) {
            int shift = toupper(key[j % strlen(key)]) - 'A';
            cipher[i] = ((toupper(text[i]) - 'A' + shift) % 26) +
                        'A';
            j++;
        } else {
            cipher[i] = text[i];
        }
    }
}
```

```
printf("Cipher text: %s", cipher);
return 0;
}
```

```
Enter plaintext: crypto
```

```
Enter key: hello
```

```
Cipher text: JVJAHV
```

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