#include <stdio.h>

// Function to print the polynomial representation

void print\_polynomial(int message[], int k1) {

int first = 1;

for (int i = 0; i < k1; i++) {

if (message[i] == 1) {

if (!first) printf(" + ");

if (i == 0) printf("1");

else if (i == 1) printf("x");

else printf("x^%d", i);

first = 0;

}

}

if (first) printf("0"); // If no term was printed, it's 0

printf("\n");

}

int main() {

int k1;

printf("Enter message length k1: ");

scanf("%d", &k1);

int message[k1];

printf("Enter %d message bits (0 or 1):\n", k1);

for (int i = 0; i < k1; i++) {

scanf("%d", &message[i]);

if (message[i] != 0 && message[i] != 1) {

printf("Invalid input! Enter only 0 or 1.\n");

return 1;

}

}

printf("Message polynomial m(x) = ");

print\_polynomial(message, k1);

return 0;

}