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#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;
        }
    }
}

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}
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printf("Message polynomial m(x) = ");
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print_polynomial(message, k1);
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return 0;
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}
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