#include

#define Min(a, b) ((a)<(b)?(a):(b))

int n, m;

char s[15][15], d[15][15];

void rot90()

{

int i, j;

for (i = 0; i < n; i++)

for (j = 0; j < m; j++)

d[j][n-i-1] = s[i][j];

n ^= m;

m ^= n;

n ^= m;

for (i = 0; i < n; i++)

{

d[i][m] = 0;

for (j = 0; j <= m; j++)

s[i][j] = d[i][j];

}

}

int main()

{

int k, l, i, j;

scanf("%d%d", &n, &m);

for (i = 0; i < n; i++)

scanf("%s", s[i]);

scanf("%d", &k);

for (i = 0; i < k/90; i++)

rot90();

if (k%90 == 0)

for (i = 0; i < n; i++)

printf("%s\n", s[i]);

else

{

j = 0;

l = n-1;

for (k = 0; k+1 < n+m; k++)

{

for (i = 0; i < l; i++)

putchar(' ');

if (k == n-1)

j = 1;

if (j == 0)

l--;

else

l++;

for (i = Min(n-1, k); i > 0 && k-i+1 < m; i--)

printf("%c ", s[i][k-i]);

printf("%c\n", s[i][k-i]);

}

}

return 0;

}