int n;

cin >> n;

vector<bool> st(n + 1, true);

function<void(int)> E\_sieve = [&](int n) {

st[0] = false, st[1] = false;

for (int i = 2; i <= n / i; i++)

{

if (st[i] == true)

{

for (int j = i \* i; j <= n; j += i)

st[j] = false;

}

}

};

E\_sieve(n);