#include <iostream>

using namespace std;

int main()

{

unsigned long x, y, A, A1, c, c1, k10, n;

bool Is\_Here;

cout << "Input A: ";

cin >> A;

x = y = 0;

k10 = 1;

n = 0;

Is\_Here = false;

A1 = A;

while (A != 0)

{

c = A % 10;

while (x != 0)

{

c1 = x % 10;

if (c1 == c)

{

Is\_Here = true;

break;

}

x /= 10;

}

x = y;

if (!Is\_Here)

{

x += (c \* k10);

k10 \*= 10;

}

y = x;

Is\_Here = false;

A /= 10;

}

while (x != 0)

{

n++;

x /= 10;

}

cout << "\nIn the number "<<A1<<" there are " << n << " different digits\n";

return 0;

}