// CPP program to find the Smallest number

// with given sum of digits and

// sum of square of digits

int dp[901][8101];

int minimumNumberOfDigits(int a, int b)

{

    if (a > b || a < 0 || b < 0 || a > 900 || b > 8100)

        return -1;

    if (a == 0 && b == 0)

        return 0;

    if (dp[a][b] != -1)

        return dp[a][b];

    int ans = 101;

    for (int i = 9; i >= 1; i--) {

        int k = minimumNumberOfDigits(a - i, b - (i \* i));

        if (k != -1)

            ans = min(ans, k + 1);

    }

    return dp[a][b] = ans;

}

void printSmallestNumber(int a,int b)

{

    memset(dp, -1, sizeof(dp));

    dp[0][0] = 0;

    int k = minimumNumberOfDigits(a, b);

    if (k == -1 || k > 100)

        cout << "-1";

    else {

        while (a > 0 && b > 0) {

            // Trying all combinations

            for (int i = 1; i <= 9; i++) {

                if (a >= i && b >= i \* i &&

                    1 + dp[a - i][b - i \* i] == dp[a][b]) {

                    cout << i;

                    a -= i;

                    b -= i \* i;

                    break;

                }

            }

        }

    }

}