Hackerland Radio Transmitters

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#include <bits/stdc++.h>

using namespace std;

string ltrim(const string &);
string rtrim(const string &);
vector<string> split(const string &);

/*
 * Complete the 'hackerlandRadioTransmitters' function below.
 *
 * The function is expected to return an INTEGER.
 * The function accepts following parameters:
 *  1. INTEGER_ARRAY x
 *  2. INTEGER k
 */

int hackerlandRadioTransmitters(vector<int> x, int k) {
    sort(x.begin(), x.end());
    int n = x.size();
    int ans = 0;
    int i = 0;

    while (i < n) {
        ans++;
        int loc = x[i] + k;
        while (i < n && x[i] <= loc) i++;
        i--;
        loc = x[i] + k;
        while (i < n && x[i] <= loc) i++;
    }
    return ans;
}

int main()
{
    ofstream fout(getenv("OUTPUT_PATH"));

    string first_multiple_input_temp;
    getline(cin, first_multiple_input_temp);

    vector<string> first_multiple_input =
split(rtrim(first_multiple_input_temp));
```

```
    int n = stoi(first_multiple_input[0]);

    int k = stoi(first_multiple_input[1]);

    string x_temp_temp;
    getline(cin, x_temp_temp);

    vector<string> x_temp = split(rtrim(x_temp_temp));

    vector<int> x(n);

    for (int i = 0; i < n; i++) {
        int x_item = stoi(x_temp[i]);

        x[i] = x_item;
    }

    int result = hackerlandRadioTransmitters(x, k);

    fout << result << "\n";

    fout.close();

    return 0;
}

string ltrim(const string &str) {
    string s(str);

    s.erase(
        s.begin(),
        find_if(s.begin(), s.end(), not1(ptr_fun<int,
int>(isspace)))
    );

    return s;
}

string rtrim(const string &str) {
    string s(str);

    s.erase(
        find_if(s.rbegin(), s.rend(), not1(ptr_fun<int,
int>(isspace))).base(),
        s.end()
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    );

    return s;
}

vector<string> split(const string &str) {
    vector<string> tokens;

    string::size_type start = 0;
    string::size_type end = 0;

    while ((end = str.find(" ", start)) != string::npos) {
        tokens.push_back(str.substr(start, end - start));

        start = end + 1;
    }

    tokens.push_back(str.substr(start));

    return tokens;
}
```