TUGAS OTH PRAKTIKUM HACKER RANK

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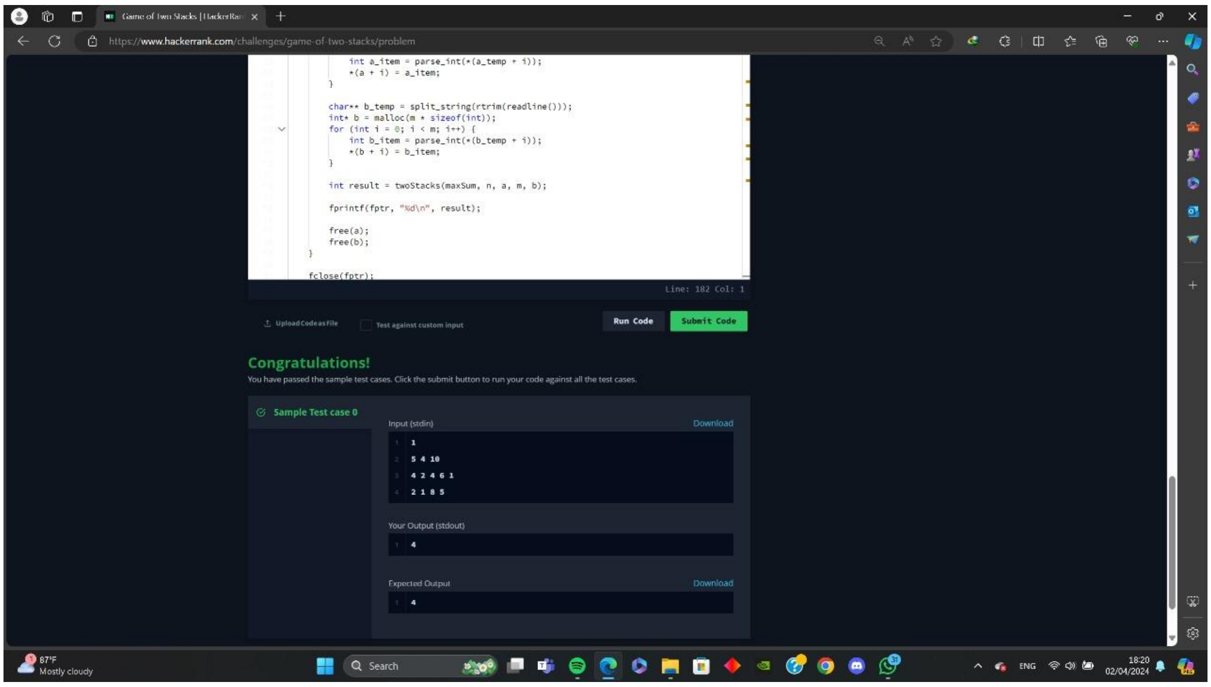
2.

```
#include <stdio.h>
#include <stdlib.h>
#include <stdbool.h>
#include <string.h>

char* readline();
char* ltrim(char*);
char* rtrim(char*);
char** split_string(char*);
int parse_int(char*);

int twoStacks(int maxSum, int a_count, int* a, int b_count, int* b) {
    int count = 0;
    int sum = 0;
    int idx_a = 0, idx_b = 0;

    while (idx_a < a_count && sum + a[idx_a] <= maxSum) {
        sum += a[idx_a];
        idx_a++;
        count++;
    }
    int max_count = count;

    while (idx_b < b_count && idx_a >= 0) {
        sum += b[idx_b];
        idx_b++;
        count++;

        while (sum > maxSum && idx_a > 0) {
            idx_a--;
            sum -= a[idx_a];
            count--;
        }

        if (sum <= maxSum && count > max_count) {
            max_count = count;
        }
    }

    return max_count;
}

int main()
{
    FILE* fptr = fopen(getenv("OUTPUT_PATH"), "w");
```

```
int g = parse_int(ltrim(rtrim(readline())));

for (int g_itr = 0; g_itr < g; g_itr++) {
    char** first_multiple_input = split_string(rtrim(readline()));

    int n = parse_int(*(first_multiple_input + 0));

    int m = parse_int(*(first_multiple_input + 1));

    int maxSum = parse_int(*(first_multiple_input + 2));

    char** a_temp = split_string(rtrim(readline()));
    int* a = malloc(n * sizeof(int));
    for (int i = 0; i < n; i++) {
        int a_item = parse_int(*(a_temp + i));
        *(a + i) = a_item;
    }

    char** b_temp = split_string(rtrim(readline()));
    int* b = malloc(m * sizeof(int));
    for (int i = 0; i < m; i++) {
        int b_item = parse_int(*(b_temp + i));
        *(b + i) = b_item;
    }

    int result = twoStacks(maxSum, n, a, m, b);
```

```
        fprintf(fptr, "%d\n", result);

        free(a);
        free(b);
    }

    fclose(fptr);

    return 0;
}

char* readline() {
    size_t alloc_length = 1024;
    size_t data_length = 0;
    char* data = malloc(alloc_length);

    while (true) {
        char* cursor = data + data_length;
        char* line = fgets(cursor, alloc_length - data_length, stdin);

        if (!line) {
            break;
        }

        data_length += strlen(cursor);
        if (data_length < alloc_length - 1 || data[data_length - 1] == '\n') {
            break;
        }

        alloc_length <<= 1;
        data = realloc(data, alloc_length);

        if (!data) {
            data = '\0';
            break;
        }
    }

    if (data[data_length - 1] == '\n') {
        data[data_length - 1] = '\0';
        data = realloc(data, data_length);
        if (!data) {
            data = '\0';
        }
    } else {
        data = realloc(data, data_length + 1);
        if (!data) {
            data = '\0';
        } else {
            data[data_length] = '\0';
        }
    }
    return data;
}

char* ltrim(char* str) {
    if (!str) {
        return '\0';
    }
    if (!*str) {
        return str;
    }
    while (*str != '\0' && isspace(*str)) {
        str++;
    }
    return str;
}

char* rtrim(char* str) {
    if (!str) {
        return '\0';
    }
    if (!*str) {
        return str;
    }
    char* end = str + strlen(str) - 1;
    while (end >= str && isspace(*end)) {
        end--;
    }
    *(end + 1) = '\0';
    return str;
}

char** split_string(char* str) {
    char** splits = NULL;
    char* token = strtok(str, " ");
    int spaces = 0;
    while (token) {
        splits = realloc(splits, sizeof(char*) * ++spaces);
        if (!splits) {
            return splits;
        }
        splits[spaces - 1] = token;
        token = strtok(NULL, " ");
    }
    return splits;
}

int parse_int(char* str) {
    char* endptr;
    int value = strtol(str, &endptr, 10);
    if (endptr == str || *endptr != '\0') {
        exit(EXIT_FAILURE);
    }
    return value;
}
```



https://www.hackerrank.com/challenges/game-of-two-stacks/problem

```
            int a_item = parse_int(*(a_temp + i));
            *(a + i) = a_item;
        }

        char** b_temp = split_string(rtrim(readline()));
        int* b = malloc(m * sizeof(int));
        for (int i = 0; i < m; i++) {
            int b_item = parse_int(*(b_temp + i));
            *(b + i) = b_item;
        }

        int result = twoStacks(maxSum, n, a, m, b);

        fprintf(fptr, "%d\n", result);

        free(a);
        free(b);
    }

    fclose(fptr);
```

Line: 182 Col: 1

Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

Sample Test case 0

Input (stdin)

```
1
5 4 10
4 2 4 6 1
2 1 8 5
```

Your Output (stdout)

```
4
```

Expected Output

```
4
```