Marwadi University	**Marwadi University** **Faculty of Technology** **Department of Information and Communication Technology**	
Sem : 5	**Name :Pushti Depani**	
Day : 25	**Date : 11/11/2022**	**Enrollment No: 92000133018**

CP Club 365Days Challenge

Date – 11/11/2022

Programming language – only C language

Problem Statement

Code must be in C language only

https://www.hackerrank.com/challenges/halloween-sale/problem?isFullScreen=true

Your Code:

```c
#include <assert.h>
#include <ctype.h>
#include <limits.h>
#include <math.h>
#include <stdbool.h>
#include <stddef.h>
#include <stdint.h>
#include <stdio.h>
#include <stdlib.h>
#include <string.h>

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

int parse_int(char*);

/*
 * Complete the 'howManyGames' function below.
 *
 * The function is expected to return an INTEGER.
```

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```
 * The function accepts following parameters:
 *  1. INTEGER p
 *  2. INTEGER d
 *  3. INTEGER m
 *  4. INTEGER s
 */

int howManyGames(int p, int d, int m, int s) {
    // Return the number of games you can buy
     int a=0;
    while(s>0){
        if(s<p)
            break;
        s=s-p;
        if(p-d<=m)
            p=m;
        else {
        p=p-d;
        }
        a++;
    }
    return a;
}

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

    char** first_multiple_input = split_string(rtrim(readline()));

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

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

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

    int s = parse_int(*(first_multiple_input + 3));

    int answer = howManyGames(p, d, m, s);
```

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

    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);
```

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```
    if (endptr == str || *endptr != '\0') {
        exit(EXIT_FAILURE);
    }

    return value;
}
```

Output (Screen Shot):

Understanding about problem:

From this code I have understood that we start from p and then reduce it till d and each iteration unit will reduce a minimum of m and then start with s and see till how many we can add.

Note: If you can't understand the problem, feel free to contact us and we'll help you. Please don't copy and paste from anywhere.

ALL THE BEST

Team CP Club