#include <math.h>

#include <stdio.h>

#include <stdio.h>

//1

double \*temperatures = (double\*) malloc(365\*sizeof(double));

//2

    char \*q = (char\*) malloc(14\*sizeof(char));

if( q != NULL)

 strcpy(q, "So many books");

//3

int \*\*grades = (int\*\*) malloc(2\*sizeof(int\*));

if( grades != NULL ){

 grades[0] = (int\*) malloc(3\*sizeof(int));

 grades[1] = (int\*) malloc(3\*sizeof(int));

}

if(grades[0] != NULL && grades[1] != NULL){

 grades[0][0] = 36;

 grades[0][1] = 24;

 grades[0][2] = 26;

 grades[1][0] = 81;

 grades[1][1] = 30;

 grades[1][2] = 74;

}

//4

float \*zeros = (float\*)calloc(4,sizeof(float));

//5

char \*\*names = (char\*\*) malloc(2\*sizeof(char\*));

int i;

if( names != NULL ){

 names[0] = (char\*) malloc(4\*sizeof(char));

 names[1] = (char\*) malloc(5\*sizeof(char));

}

if(names[0] != NULL && names[1] != NULL){

 strcpy(names[0], "Ali");

 strcpy(names[1], "Omar");

}

PS C:\Users\Dell> cd "c:\Users\Dell\OneDrive\Documents\Lbs C\lab 3\" ; if ($?) { gcc test.c -o test } ; if ($?) { .\test }

#include <math.h>

#include <stdio.h>

#include <stdio.h>

#include <stdlib.h>

#include <stdio.h>

#include<stdio.h>

int main() {

    //1) //delete free(p)

char \*p = "Hello world";

 printf("%d\n", \*p);

//2) runtime error ; realloc could free the pointer p in which case freeing it again will cause an error,

// or it could simply extend it in which case you're freeing it twice.

int\* p = (int\*) malloc(10 \* sizeof(int));

p = (int\*) realloc(p, 5 \* sizeof(int));

free(p);

//3) compile time error: wrong cast from (int\*) to (int\*\*)

   // runtime error: not allocating enough for pointers but storing 2 pointers in p (allocated for 2 integers)

 int\*\* p = (int\*\*) malloc(2 \* sizeof(int\*));

p[0] = (int\*) malloc(5 \* sizeof(int));

p[1] = (int\*) malloc(5 \* sizeof(int));

free(p[0]);

free(p[1]);

free(p);

 }

PS C:\Users\Dell> cd "c:\Users\Dell\OneDrive\Documents\Lbs C\lab 3\" ; if ($?) { gcc test.c -o test } ; if ($?) { .\test }

Link: <https://github.com/Link20222/CSC_215_KSU_44_C-language/tree/main/HWs/3> (I will upload my codes in GitHub later)