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| MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE  NATIONAL TECHNICAL UNIVERSITY  «KHARKIV POLYTECHNIC INSTITUTE»  Department of Software Engineering and Management Information Technologies  List of laboratory reports  discipline « Fundamentals of Operating System »  Executed by: Chukwu Irele omike  Student of group KH-201.8ei.1  Checked by:  Prof. S. L  Gloskakova Anna Alexandrouna  Kharkiv – 2019 |

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

NATIONAL TECHNICAL UNIVERSITY

«KHARKIV POLYTECHNIC INSTITUTE»

Department of Software Engineering and Management Information Technologies

Report from lab Individual Task

discipline « Fundamentals of Operating System »

Kharkiv

2019

***Task for the individual work:***

Develop and debug program project (two or more source files, connected) in Linux environment using ***vim, emac or nano editor***, **gcc/g++** compiler, project manager **make** and debugger **gdb**. Program project must implement collection of interacting units, using standard input-output.

During work presentation, student must explain project development, and used tools of Linux environment.

Create a program to find the values of the expressions **A** and **B** for the given values of the source data **x**, **y**, **z**. The functions for finding **A** and **B** must be described in various files. You can get the input data (according your variant) from your teacher.

**Solution :**

**The code :**

**Source file 1:** CMakeProject1.cpp

// CMakeProject1.cpp : Defines the entry point for the application.

//

//#include "CMakeProject1.h"

#include "functionA.h"

#include <cmath>

using namespace std;

void functionB(double x, double y, double z)

{

double arc = pow(asin(z),2);

int absolute = abs(x + y);

double B = arc + absolute;

cout << "the value of b is " << B;

}

int main()

{

double x = 16.5;

double y = -2.75;

double z = 0.15;

cout << " enter value of x ";

cin >> x;

cout << " enter value of y ";

cin >> y;

cout << " enter value of z ";

cin >> z;

functionA(x,y);

functionB(x, y, z);

//cout << "Hello CMake." << endl;

return 0;

}

**Source file 2:** functionA.cpp

// CMakeProject1.cpp : Defines the entry point for the application.

//

#include "CMakeProject1.h"

#include "functionA.h"

#include "math.h"

using namespace std;

void functionA(double x, double y){

double power = pow(x, (y + 2));

double cuberoot = cbrt(x);

double A = sqrt(10 \* (cuberoot + power));

cout << "the value of A is " << A;

}

**Source file 3 :** functionA.h

// CMakeProject1.h : Include file for standard system include files,

// or project specific include files.

#pragma once

#include <iostream>

#include <cmath>

using std::cout;

using std::endl;

using std::fabs;

// TODO: Reference additional headers your program requires here.

void functionA(double x, double y);

void functionB(double Z, double x, double y);

**makefile :**

**objects = CMakeProject1.o functionA.o**

**.PHONY : clean**

**lab1: $(objects)**

**g++ -o lab1 $(objects)**

**CMakeProject1.o: CMakeProject1.cpp CMakeProject1.h**

**g++ -g CMakeProject1.cpp -c CMakeProject1.cpp -o CMakeProject1.o**

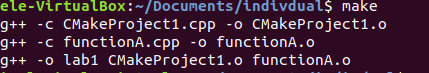
**functionA.o: functionA.cpp functionA.h**

**g++ -c functionA.cpp -o functionA.o**

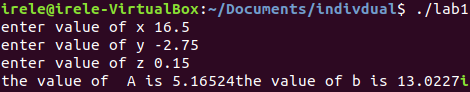
**clean :**

**rm -f lab1 $(objects)**

**compile make file**



**Run the code :**



**debug with gdb**

