**MARKS AWARDED: 94**

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\* CS1010 AY2011/2 Semester 2 Lab1 Ex1

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\* box.c

\* This program calculates the surface area of a box, and the

\* length of the diagonal connecting two vertices furthest apart.

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\* Loh Wan Xin

\* B02

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#include <stdio.h>

#include <math.h>

double compute\_surface\_area (double, double, double);

double compute\_diagonal (double, double, double);

int main(void)

{

int length, width, height, surface\_area;

double diagonal;

printf("Enter length: ");

scanf("%d", &length);

printf("Enter width : ");

scanf("%d", &width);

printf("Enter height: ");

scanf("%d", &height);

surface\_area = compute\_surface\_area (length, width, height);

diagonal = compute\_diagonal (length, width, height);

printf("Surface area = %d\n", surface\_area);

printf("Diagonal = %.2f\n", diagonal);

return 0;

}

//Compute surface area

double compute\_surface\_area (double length, double width, double height)

{

double area;

area = 2\*length\*width + 2\*length\*height + 2\*width\*height;

return area;

}

//Compute diagonal of the box

double compute\_diagonal (double box\_length, double box\_width, double box\_height)

{

double sum\_square;

sum\_square = pow(box\_length,2)+ pow(box\_width,2) + pow(box\_height,2);

return sqrt(sum\_square);

}