Lakeland Community College

Department of Electronic Engineering Technology

CPET 1120 – C Programming for Engineering Technology

LAB 5

Write a program that calculates the area of a rectangle, the area of a square, the area of a triangle, and the area of a circle.

There are 6 functions:

void main (void)

Calls the other functions via a menu using a selection loop.

Use local variables of type static float fS, fa_sq, fS1, fS2, fa_rec, fR, fa_cir, fB, fH, fa_tri and char cSel.

User prompt menu using a case statement to select between:

A Calculate and display the area of a rectangle.
B Calculate and display the area of a square.
C Calculate and display the area of a circle.
D Calculate and display the area of a triangle.
Q Quit.

void a_rect(float *fS1_ptr, float *fS2_ptr, float *fAR_ptr**)**

User inputs the two sides and calculates the area

Use dereferenced pointers to access the sides and the area.

void a_square(float *fS_ptr, float *fAS_ptr**)**

User inputs the side and calculates the area

Use dereferenced pointers to access the side and the area.

void a_circle(float *fR_ptr, float *fAC_ptr**)**

User inputs the radius and calculates the area

Use dereferenced pointers to access the radius and area.

void a_triangle(float *fB_ptr, float *fH_ptr, float *fAT_ptr**)**

User inputs the base and height and calculates the area

Use dereferenced pointers to access the base, height and area.

void display()

Use formal parameter variables float fs, fA_sq, fs1, fs2, fA_rec, fr, fA_cir, fb, fh, fA_tri and char csel.

The correct printf() statement is selected via an if, else if, else structure.

LAB REQUIREMENTS

- *Print the user inputted text to computer screen*
- *Print the program output/results to screen*
- *Mark the beginning of main, and each of the user generated function definitions, with the format described and used in your previous labs*
- *Attach a copy of the Source Code with the Program results to this page and turn it in.*