#include <stdio.h>

#include <math.h>

#define PI 3.141592653589793238

int main() {

int choice;

double area;

printf("Choose a shape to calculate the area:\n");

printf("1. Circle\n");

printf("2. Rectangle\n");

printf("3. Triangle\n");

printf("Enter your choice (1-3): ");

scanf("%d", &choice);

switch (choice) {

case 1: {

double radius;

printf("Enter the radius of the circle: ");

scanf("%lf", &radius);

area = PI \* radius \* radius;

printf("The area of the circle is: %.2lf\n", area);

break;

}

case 2: {

double length, width;

printf("Enter the length of the rectangle: ");

scanf("%lf", &length);

printf("Enter the width of the rectangle: ");

scanf("%lf", &width);

area = length \* width;

printf("The area of the rectangle is: %.2lf\n", area);

break;

}

case 3: {

double base, height;

printf("Enter the base of the triangle: ");

scanf("%lf", &base);

printf("Enter the height of the triangle: ");

scanf("%lf", &height);

area = 0.5 \* base \* height;

printf("The area of the triangle is: %.2lf\n", area);

break;

}

default:

printf("Invalid choice. Please run the program again and enter a valid choice.\n");

}

return 0;

}