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#include<stdio.h>
#include<math.h>
main(){
    int shape , cal;
    float radius,length,width,side1,side2,side3,base,height,area,perimeter;
    printf("----Geometry Calculator-----\n");
    printf("Enter your shape that you want to calculate.\n");
    printf("1.Circle\n");
    printf("2.Triangle\n");
    printf("3.Rectangle\n");
    scanf("%d",&shape);
    switch(shape){

        case 1:
            printf("You have selected the circle so,Enter what you want to
calculate.\n");

            printf("1.Area\n");
            printf("2.Perimeter\n");
            scanf("\n%d",&cal);
            switch(cal){
                case 1:
                    printf("wow,you want to calaulate Area of circle.\n");
                    printf("So, enter the radius of circle: ");
                    scanf("\n%f",&radius);
                    area=3.14*radius*radius;
                    printf("\nArea of Cirle : %.2f",area);
                    break;
                case 2:
                    printf("wow,you want to calculate Parimeter of
circle.\n");

                    printf("So, enter the radius of circle: ");
                    scanf("\n%f",&radius);
                    perimeter=2*3.14*radius;
                    printf("\nPerimeter of Cirle : %.2f",perimeter);
                    break;
                default:
                    printf("\nYou have entered invalid number in circular region");
            }
            break;

        case 2:
            printf("\nYou entered in Triangular .Enter what you want to calculate.");
            printf("\n1.Area");
            printf("\n2.Perimeter");
            scanf("\n%d",&cal);
            switch(cal){
                case 1:
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        printf("\n wow,you want to calculate Area of Triangle.");
        printf("\n So, enter the base and height of Triangle: ");
        scanf("\n%f \n%f",&base,&height);
        area=0.5*base*height;
        printf("\nArea of Triangle : %.2f",area);
        break;
    case 2:
        printf("\nwow,you want to calaulate Perimeter of
Triangle.");

        printf("\nSo, enter three side of triangle: ");
        scanf("\n%f %f %f",&side1,&side2,&side3);
        perimeter=side1+side2+side3;
        printf("\nperimeter of Triangle : %.2f",perimeter);
        break;
    default:
        printf("\nYou have entered invalid number in Triangular region");

    }
    break;
case 3:
    printf("\nYou have selected Rectangle.Enter what you want to
calculate.");

    printf("\n1.Area");
    printf("\n2.Parimeter");
    scanf("%d",&cal);
    switch(cal){
        case 1:
            printf("\nwow,you want to calaulate Area of
Rectangle.");

            printf("\nSo, enter the length and width of Rectanlge: ");
            scanf("\n%f %f",&length,&width);
            area=length*width;
            printf("\nArea of Rectangle : %.2f",area);
            break;

            case 2:
                printf("\nwow,you want to calaulate Parimeter of
Rectangle.");

                printf("\nSo, enter the length and width of Rectanlge: ");
                scanf("\n %f %f",&length,&width);
                perimeter=2*(length+width);
                printf("\n perimeter of Rectangle : %.2f",perimeter);
                break;


                default:
                    printf("\nYou have entered invalid number in rectangular region");

                }break;

    default:

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        printf("\nYou have entered invalid number");  
    }  
    return 0;  
}
```

 C:\Users\Fine Gallery\OneDrive\Documents\lab5-Q6#0158.exe

```
----Geometry Calculator-----  
Enter your shape that you want to calculate.  
1.Circle  
2.Triangle  
3.Rectangle  
1  
You have selected the circle so,Enter what you want to calculate.  
1.Area  
2.Perimeter  
2  
wow,you want to calculate Parimeter of circle.  
So, enter the radius of circle: 20  
  
Perimeter of Cirle : 125.60  
-----  
Process exited after 111.2 seconds with return value 0  
Press any key to continue . . .
```