Fundamentals of Computer Programming 2
Practice Problems – January 8, 2003

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Branching Mechanisms

if-else statement	*switch* statement

if (*exp*) {
    P1;
} else {
    P2;
}
	switch (*exp*) {
	case *value1* : P1; break;
	case *value2* : P2; break;
	. . .
	case *valuek* : Pn; break;
	}

Problems

1. Write a program that takes as input the three sides of a triangle and outputs its area. Make sure you choose the right data types for your variables. (The area of a triangle with sides a,b,c is $\sqrt{s(s-a)(s-b)(s-c)}$ where $s = (a + b + c)/2$.

2. Write a Fahrenheit-Celsius conversion program. The user should be able to do the conversion both ways.

3. Write a program for calculating areas and perimeters : the user chooses either "t" (for triangle), "r" (for rectangle) or "c" (for circle). The program then prompts the user to enter the required data and outputs the corresponding area and perimeter.