Decision making structures require the programmer to specify one or more conditions to be evaluated or tested by the program, along with a statement or statements to be executed if the condition is determined to be true, and optionally, other statements to be executed if the condition is determined to be false.

Following is the general form of a typical decision making structure found in most of the programming languages:

- **if statement**: An *if* statement consists of a boolean expression followed by one or more statements.

- **if...else statement**: An *if* statement can be followed by an optional *else* statement, which executes when the boolean expression is false.

- **nested if statements**: You can use one *if* or *else if* statement inside another *if* or *else if* statements.

- **switch statement**: A *switch* statement allows a variable to be tested for equality against a list of values.

- **nested switch statements**: You can use one *switch* statement inside another *switch* statements.

---

### The ?: Operator:

We have covered **conditional operator** `?:` in previous chapter which can be used to replace
if...else statements. It has the following general form:

```
Exp1 ? Exp2 : Exp3;
```

Where Exp1, Exp2, and Exp3 are expressions. Notice the use and placement of the colon.

The value of a ? expression is determined as follows: Exp1 is evaluated. If it is true, then Exp2 is evaluated and becomes the value of the entire ? expression. If Exp1 is false, then Exp3 is evaluated and its value becomes the value of the expression.