



SNS COLLEGE OF TECHNOLOGY

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## Case Statements

Switch and case statement is available in a variety of languages. The syntax of case statement is as follows:

1. **switch** E
2.           begin
3.                   **case** V1: S1
4.                   **case** V2: S2
5.                   .
6.                   .
7.                   .
8. **case** Vn-1: Sn-1
9. **default:** Sn
10.           end

The translation scheme for this shown below:

Code to evaluate E into T

1. **goto** TEST
2.           L1:     code **for** S1
3.                   **goto** NEXT
4.           L2:     code **for** S2
5.                   **goto** NEXT
6.                   .
7.                   .
8.                   .
9.           Ln-1:  code **for** Sn-1
10.                   **goto** NEXT
11.           Ln:    code **for** Sn
12. **goto** NEXT

13. TEST: **if** T = V1 **goto** L1  
14. **if** T = V2 **goto** L2  
15. .  
16. .  
17. .  
18. **if** T = V<sub>n-1</sub> **goto** L<sub>n-1</sub>  
19. **goto**  
20. NEXT:

- When switch keyword is seen then a new temporary T and two new labels test and next are generated.
- When the case keyword occurs then for each case keyword, a new label L<sub>i</sub> is created and entered into the symbol table. The value of V<sub>i</sub> of each case constant and a pointer to this symbol-table entry are placed on a stack.