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Selection control structure

In a selection control structure, the step to be executed next is based on an decision taken. If the condition is true, some path is followed. If the condition is false, different path is followed.

There are two main selection structures: They are,

1. IF-THEN-ELSE statement
2. CASE statement

1. The IF-THEN-ELSE Statement

In IF-THEN-ELSE selection structure, if the condition is true, the THEN part is executed. Otherwise the ELSE part is executed.

```
IF condition THEN
        Process 1
ELSE
        Process 2
END IF
```

Example: Find maximum of any 3 numbers

```
READ values of A, B, C
IF A is greater than B THEN
ASSIGN A to MAX
ELSE
ASSIGN B to MAX
IF MAX is greater than C THEN
PRINT MAX is greatest
ELSE
PRINT C is greatest
STOP
```

P1 Write a pseudo code to find whether the given number is even.

```
START
READ n
IF n MOD 2=0 THEN
        DISPLAY "Number is Even"
ELSE
        DISPLAY "Number is Odd"
ENDIF
STOP
```

P2 Find greatest among two numbers

```
START
READ a, b
IF a IS GREATER THAN b THEN
        DISPLAY "a is greater"
ELSE
        DISPLAY "b is greater"
ENDIF
STOP
```

The case statement

The case statement is used when many number of conditions to be checked. In a case statement, depending on the expression, one of the conditions is true. Based on the value, the corresponding statements are executed. If no match for the expression occurs, then the default option is executed.

```
CASE value 1 :
        Process 1
CASE value 2 :
        Process 2
CASE value n :
        Process n
DEFAULT :
        others
END CASE
```

Eg : (simple calculator)

```
START
READ a, b
READ choice
CASE choice OF
    + : PRINT A+B
    - : PRINT A-B
    * : PRINT A*B
    / : PRINT A/B
END CASE
```

Grade 10 - O
Grade 9 - S
Grade 8 - A
Grade 7 - B
Grade 6 - C
Grade 5 - D
Grade 4 - E
~~Grade~~
Others - F