Selection

`IF` statements (8.1.4 (b) and 8.1.5)

`IF` statements may or may not have an `ELSE` clause.

`IF` statements without an `ELSE` clause are written as follows:

```
IF <condition>
  THEN
    <statements>
ENDIF
```

`IF` statements with an `ELSE` clause are written as follows:

```
IF <condition>
  THEN
    <statements>
  ELSE
    <statements>
ENDIF
```

Note that the `THEN` and `ELSE` clauses are only indented by two spaces. (They are, in a sense, a continuation of the `IF` statement rather than separate statements.)

When `IF` statements are nested, the nesting should continue the indentation of two spaces.

Example – nested `IF` statements

```
IF ChallengerScore > ChampionScore
  THEN
    IF ChallengerScore > HighestScore
      THEN
        OUTPUT ChallengerName, " is champion and highest scorer"
      ELSE
        OUTPUT Player1Name, " is the new champion"
    ENDIF
  ELSE
    OUTPUT ChampionName, " is still the champion"
    IF ChampionScore > HighestScore
      THEN
        OUTPUT ChampionName, " is also the highest scorer"
    ENDIF
ENDIF
```

CASE statements (8.1.4 (b))

CASE statements allow one out of several branches of code to be executed, depending on the value of a variable.

CASE statements are written as follows:

```
CASE OF <identifier>
  <value 1> : <statement>
  <value 2> : <statement>
  ...
ENDCASE
```

An OTHERWISE clause can be the last case:

```
CASE OF <identifier>
  <value 1> : <statement>
  <value 2> : <statement>
  ...
  OTHERWISE <statement>
ENDCASE
```

It is best practice to keep the branches to single statements as this makes the pseudocode more readable. Similarly, single values should be used for each case. If the cases are more complex, the use of an IF statement, rather than a CASE statement, should be considered.

Each case clause is indented by two spaces. They can be considered as continuations of the CASE statement rather than new statements.

Note that the case clauses are tested in sequence. When a case that applies is found, its statement is executed, and the CASE statement is complete. Control is passed to the statement after the ENDCASE. Any remaining cases are not tested.

If present, an OTHERWISE clause must be the last case. Its statement will be executed if none of the preceding cases apply.

Example – formatted CASE statement

```
INPUT Move
CASE OF Move
  'W' : Position ← Position - 10
  'E' : Position ← Position + 10
  'A' : Position ← Position - 1
  'D' : Position ← Position + 1
  OTHERWISE OUTPUT "Beep"
ENDCASE
```