

Topics: Selection statement, input, good programming style

Reading (ML): Sec 3,3, 3.4, 2.2.4

Branching

Example: Bacteria B reproduces only when the temperature is above 12°C. The rate is a function of the temperature t in °C: $(t - 12)^2$. Write a program to calculate the rate at which bacteria B reproduces given some temperature entered in °F.

Simple if Construct

```
if condition
    statements to execute if condition is true
else
    statements to execute if condition is false
end
```

The if Construct

```
if condition1
    statements to execute if condition1 is true
elseif condition2
    statements to execute if condition1 is false but condition2 is true
else
    statements to execute if all previous conditions are false
end
```

Rules of the if Construct

- Only one block of statements is executed. Execution then continues with the next executable statement following end
- There can be at most one else clause
- There can be any number of elseif clauses

Input statement

Syntax: `variable = input('prompt')`

Good programming style

- use comments
- use meaningful variable names
- use named constants
- indent sub-structures