

Subprograms and overloading

- sequential algorithm that performs certain computation.
- 2 kinds:
 - functions:
 - * used for computing single values
 - * executes in zero simulation time
 - procedures:
 - * returns zero or more values
 - * may or may not execute in zero simulation time
-

```
subprogram-specification is
    subprogram-item-declaration
begin
    subprogram-statements
end [function/procedure]
```

Functions:

- returns single value `return [expression]`
- runs in zero simulation time
- common uses are as:
 - resolution functions
 - type conversion functions

Example

```
function to_character (ARG: STD_ULOGIC)
    return character is
begin
    case ARG is
        when 'U' => return 'U';
        when 'X' => return 'x';
        when '0' => return '0';
        when 'I' => return 'I';
        when 'Z' => return 'Z';
        when 'W' => return 'W';
    end case;
end to_character
```