

Function

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Function (1)

type `fourval` is (X, L, H, Z);  type `fourvalue` is ('X', 'L', 'H', 'Z');

```
function convert4val(S : fourval) return fourvalue is
begin
  case S is
    when X => return 'X';
    when L => return 'L';
    when H => return 'H';
    when Z => return 'Z';
  end case;
end convert4val;
```

Function (2)

function can be declared in entity

```
entity reg is
  port ( ... )

  function convert4val(S : fourval) return fourvalue is
  begin
    case S is
      when X => return 'X';
      when L => return 'L';
      when H => return 'H';
      when Z => return 'Z';
    end case;
  end convert4val;
end reg
```

Function (3)

function can be declared in architecture

architecture structure of reg is

```
function convert4val(S : fourval) return fourvalue is
begin
  case S is
    when X => return 'X';
    when L => return 'L';
    when H => return 'H';
    when Z => return 'Z';
  end case;
end convert4val;
```

begin

```
q <= convert4val( p );
```

end structure

References

[1] <http://en.wikipedia.org/>

[2]