Data Types and Procedural Statements

Procedural Programming Statements

Bob Oden

UVM Field Specialist – Siemens EDA

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If-Else Selection Statements

```
If (expression) begin
    statement;
    end
else if (expression) begin
    statement;
    end
else begin
    statement;
    end
```

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Case Selection Statements

```
case[xz] (case_expression)
    case_item: begin
        statement;
    end
    default: begin
        statement;
    end
    endcase
```

casez allows z or ? In case_item
casex allows x, z or ? In case_item

Case_item expression evaluated in order of appearance. Linear search terminates after first matching case_item.

For Loop Statements

Syntax

```
for (loop_variable_type loop_variable=initial_value;
        loop_completion_expression;
        loop_variable_change) begin
    statement;
    end
```

Example

```
for (int i=0; i <= 255; i++) begin
    statement;
    end
```

Repeat and Foreach Loop Statements

```
repeat(iteration_count) begin
    statement;
    end

foreach (unpacked_array[iteration_variable]) begin
    statement;
    end
```

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While Loop Statements

```
while (condition) begin
    statement;
    end

do
    statement
    while (condition);
```

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Forever Loop Statements

```
forever begin
   statement;
   end
```

Forever loops without a blocking statement will hang simulation.

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Jump Statements

Break out of the current loop

```
break
```

Jump to the end of the current loop

```
continue
```

Exit from a function with a return value

```
return expression;
```

Exit from a void function or a task (optional)

```
return;
```

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