

39th Day

Constraints

0101010101(array format)

```
class msd;

    rand int a[];

    constraint c1{a.size==10;}
    constraint c2
    {
        foreach (a[i])

            if(i%2==0)
                a[i]==0;
            else
                a[i]==1;

    }

    function void post_randomize();
        $display("randomized values of a=%p",a);
    endfunction

endclass

module tb;

    initial
        begin
```

```
msd m=new();
m.randomize();

end

endmodule
```

Simulation

chronologic ver simulator Copyright 1994-2025

Contains Synopsys proprietary information.

Compiler version U-2023.03-SP2_Full64; Runtime version U-2023.03-SP2_Full64; May 2 10:24 2025

randomized values of a='{0, 1, 0, 1, 0, 1, 0, 1, 0, 1}'

V C S S i m u l a t i o n R e p o r t

Time: 0 ns

CPU Time: 0.400 seconds; Data structure size: 0.0Mb

Fri May 2 10:24:03 2025

Result

Code 2 (0101010101)

```
//0101010101
```

```
class msd;
```

```
rand int a[];
```

```
constraint c1{a.size==10;}
```

```
constraint c2
```

```
{
```

```
foreach (a[i])
```

```
if(i%2==0)
```

```
a[i]==0;
```

```
else
```

```
a[i]==1;
```

```
}
```

```
function void post_randomize();

$display();

$write("randomized pattern of a is ");
foreach(a[i])
begin
$write("%0d ",a[i]);
end
$display();
endfunction
endclass
```

```
module tb;

initial
begin
msd m=new();
m.randomize();
end
endmodule
```

Simulation

Contains Synopsys proprietary information.

Compiler version U-2023.03-SP2_Full64; Runtime version U-2023.03-SP2_Full64; May 2 10:39 2025

randomized pattern of a is 0 1 0 1 0 1 0 1 0 1

V C S S i m u l a t i o n R e p o r t

Time: 0 ns

CPU Time: 0.400 seconds; Data structure size: 0.0Mb

Fri May 2 10:39:12 2025

Code3

```
//1234554321
```

```
class msd;
```

```
    rand int a[];
```

```
    constraint c1{a.size==10;}
```

```
    constraint c2
```

```
{
```

```
    foreach(a[i])
```

```
        if(i<5)
```

```
            a[i]==i+1;
```

```
    else if(i<10)
```

```
        a[i]==10-i;
```

```
}
```

```
function void post_randomize();
```

```
    $display();
```

```
    $write("randomized value of a is ");
```

```
    foreach(a[i])
```

```
        begin
```

```
            $write("%0d ",a[i]);
```

```
        end
```

```
    $display();
```

```
endfunction
```

```
endclass
```

```
module tb;
```

```
    initial
```

```
        begin
```

```
            msd m=new();
```

```
m.randomize();  
  
end  
  
endmodule
```

Simulation

Compiler version U-2023.03-SP2_Full64; Runtime version U-2023.03-SP2_Full64; May 2 10:54 2025

randomized value of a is 1 2 3 4 5 5 4 3 2 1

V C S S i m u l a t i o n R e p o r t

Time: 0 ns

CPU Time: 0.410 seconds; Data structure size: 0.0Mb

Fri May 2 10:54:40 2025

Done