

22nd Day

SV Arrays

```
module sv_arrays();
```

```
    logic [7:0] packed_array;
```

```
    logic [7:0] unpacked_array [0:3];
```

```
    int dyn_array[];
```

```
    int assoc_array[*];
```

```
    int queue_array[$];
```

```
    int k;
```

```
initial
```

```
begin
```

```
    packed_array = 8'hC2;
```

```
    unpacked_array[0] = 8'hFF;
```

```
    unpacked_array[1] = 8'hC5;
```

```
    dyn_array = new[3];
```

```
    dyn_array[0] = 42;
```

```
    assoc_array["key"] = 123;
```

```
    queue_array.push_back(7);
```

```
    queue_array.push_back(8);
```

```
    queue_array.push_front(26);
```

```
queue_array.push_front(28);  
$display("before popping Queue[3]: %0d", queue_array[3]);  
k=queue_array.pop_back;  
$display("after popping Queue[3]: %0d", queue_array[3]);  
  
$display("Packed: %b_%b", packed_array[7:4],packed_array[3:0]);  
$display("Unpacked[0]: %b_%b", unpacked_array[0][7:4],unpacked_array[0][3:0]);  
$display("Unpacked[1]: %b", unpacked_array[1]);  
$display("Dynamic[0]: %0d", dyn_array[0]);  
$display("Assoc['key']: %0d", assoc_array["key"]);  
$display("Queue[0]: %0d", queue_array[0]);  
$display("Queue[1]: %0d", queue_array[1]);  
$display("Queue[2]: %0d", queue_array[2]);  
$display("popped value is %0d",k);  
end  
  
endmodule
```

SIMULATION

Contains Synopsys proprietary information.

Compiler version U-2023.03-SP2_Full64; Runtime version U-2023.03-SP2_Full64; Apr 9 09:58 2025

before popping Queue[3]: 8

after popping Queue[3]: 0

Packed: 1100_0010

Unpacked[0]: 1111_1111

Unpacked[1]: 11000101

Dynamic[0]: 42

Assoc['key']: 123

Queue[0]: 28

Queue[1]: 26

Queue[2]: 7

popped value is 8

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

Manoj Kurish