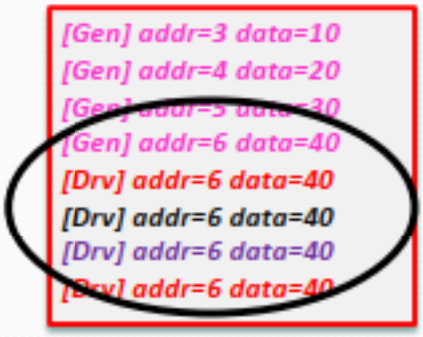
SV Environment

Objects storage in mailbox

```
packet tr,tr2;
mailbox #(packet) mbx;

initial begin
  mbx=new(4);
  tr=new();

fork

 repeat(4) begin
 void'(tr.randomize());
 mbx.put(tr);
 $display("[gen] addr=%0d data=%0d",tr.addr,tr.data);
  end

 repeat(4) begin
 mbx.get(tr2);
$display("[Drv] addr=%0d data=%0d",tr2.addr,tr2.data);
end

join
end
```



Objects storage in mailbox

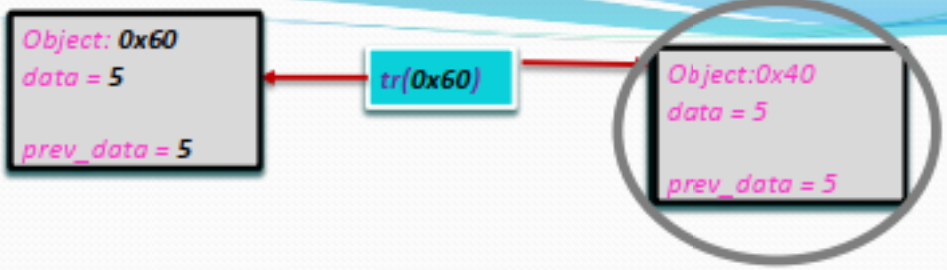
```
initial begin
  mbx=new(4);


fork
begin: Generator
 repeat(4) begin
tr=new();
 void'(tr.randomize());
 mbx.put(tr);
 $display("[gen] addr=%0d data=%0d",tr.addr,tr.data);
  end
end

begin: Driver
 repeat(4) begin
 mbx.get(tr2);
$display("[Drv] addr=%0d data=%0d",tr2.addr,tr2.data);
end
   end
join
end
```

```
[Gen] addr=3 data=10
[Gen] addr=4 data=20
[Gen] addr=5 data=30
[Gen] addr=6 data=40
[Drv] addr=3 data=10
[Drv] addr=4 data=20
[Drv] addr=5 data=30
[Drv] addr=6 data=40
```


```
class packet;
rand bit [2:0] data;

bit [2:0] prev_data;

 function void post_randomize();
  prev_data = data;
 endfunction

constraint valid {
   data != prev_data;
 }
endclass
```

```
Data=5
Data=6
Data=9
```

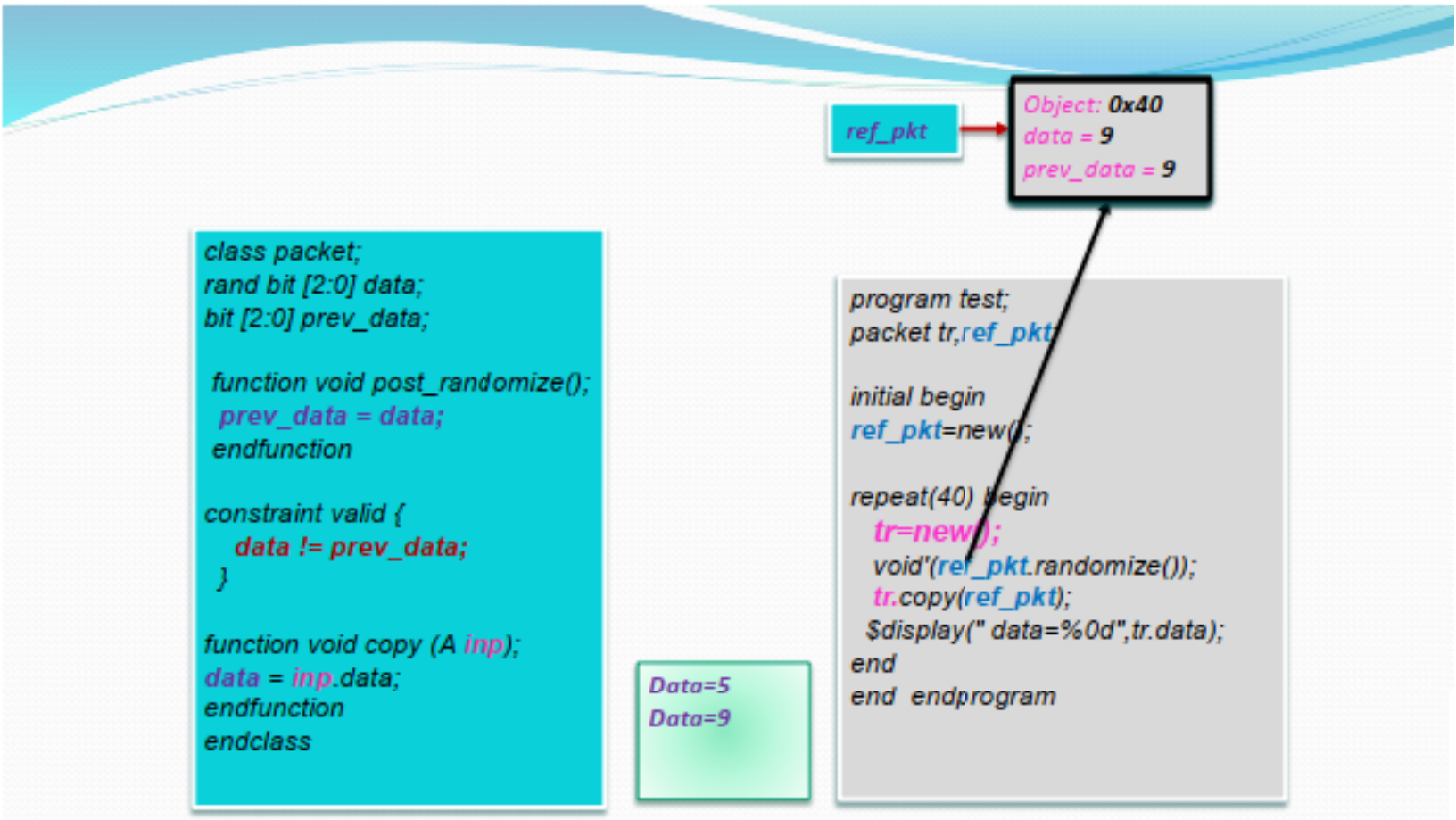
```
program test;
packet tr;

initial begin
tr=new();

repeat(40) begin

void'(tr.randomize());

$display(" data=%0d",tr.data);

end
end
endprogram
```




```
class packet;
rand bit [2:0] data;

bit [2:0] prev_data;

 function void post_randomize();
  prev_data = data;
 endfunction

constraint valid {
    data != prev_data;
 }
endclass
```

```
Data=5
Data=5
```

```
program test;
packet tr;

initial begin
repeat(40) begin
  tr=new();

  void'(tr.randomize());

  $display(" data=%0d",tr.data);

end
end  endprogram
```


ref_pkt
Object: 0x40
data = 9
prev_data = 9
class packet;
rand bit [2:0] data;
bit [2:0] prev_data;
function void post_randomize();
prev_data = data;
endfunction
constraint valid {
data != prev_data;
}
function void copy (A inp);
data = inp.data;
endfunction
endclass
Data=5
Data=9
program test;
packet tr,ref_pkt;
initial begin
ref_pkt=new();
repeat(40) begin
tr=new();
void'(ref_pkt.randomize());
tr.copy(ref_pkt);
$display(" data=%0d",tr.data);
end
end endprogram