PROBLEM: Place the given boxes inside the container, using below conditions

1.Begin placing the boxes from the top-left corner of the container.

2.Fill the boxes in a row until there is not enough space to accommodate the next box. If there's insufficient space, move to the next row and start filling from the left again.

3.Ensure that no box has a width greater than the width of the container.

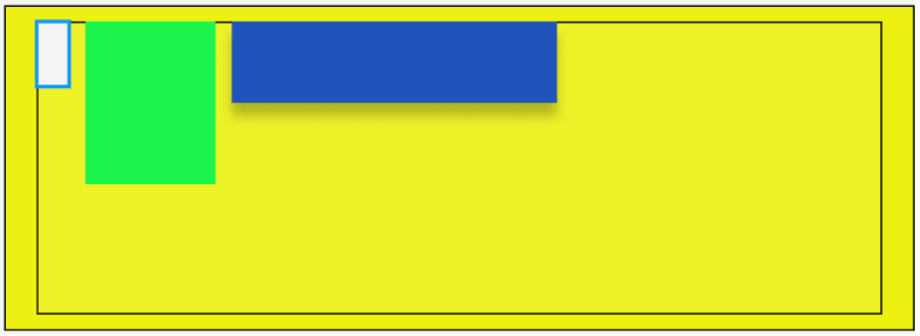
4.When a box exceeds the vertical space of the container, scale the box while maintaining its aspect ratio to fit it within the container.

5.In cases where the vertical space is entirely filled, and there are still remaining boxes to place, scale down the boxes in the last row by 50% and continue filling the next row to optimize space utilization.

TEST CASES:

1.

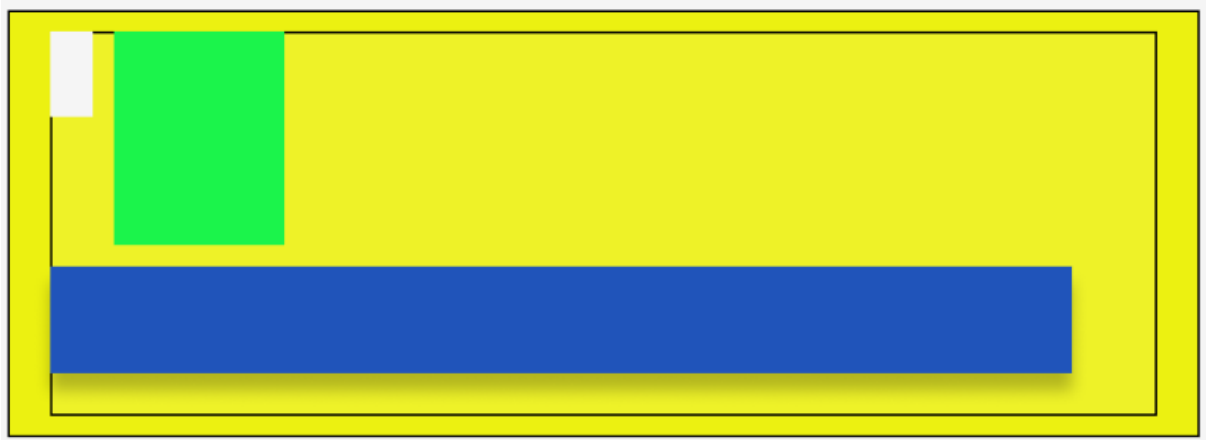
```
{
 boxes: [ {w: 20, h: 10, rotate:true, angle:90, color: "white"},
          {w: 40, h: 50, rotate:false, angle:0, color: "green"},
          {w: 100, h: 25, rotate:false, angle:0, color: "blue"}],
  design: { w: 280, h: 100, margin: { h: 10,  v: 5 } }
  boxPadding: 5
}
```



2.

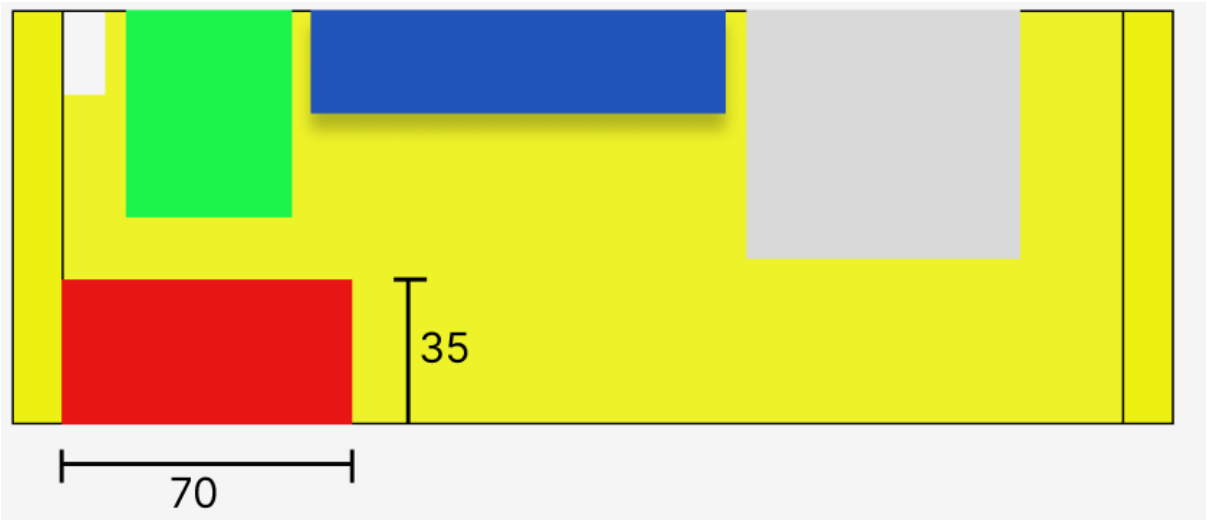
```
{
 boxes: [ {w: 20, h: 10, rotate:true, angle:90, color: "white"},
          {w: 40, h: 50, rotate:false, angle:0, color: "green"},
          {w: 240, h: 25, rotate:false, angle:0, color: "blue"}],
  design: { w: 280, h: 100, margin: { h: 10,  v: 5 } }
  boxPadding: 5
```

}



3.

```
{
 boxes: [ {w: 20, h: 10, rotate:true, angle:90, color: "white"},
             {w: 40, h: 50, rotate:false, angle:0, color: "green"},
             {w: 100, h: 25, rotate:false, angle:0, color: "blue"}],
              {w: 60, h: 66, rotate:true, angle:90, color: "grey"}],
              {w: 100, h: 50, rotate:false, angle:0, color: "red"}],
  design: { w: 280, h: 100, margin: { h: 12,  v: 0 } }
  boxPadding: 5
}
```



4.

```
{
 boxes: [ {w: 20, h: 10, rotate:true, angle:90, color: "white"},
             {w: 40, h: 50, rotate:false, angle:0, color: "green"},
             {w: 100, h: 25, rotate:false, angle:0, color: "blue"}],
              {w: 60, h: 80, rotate:true, angle:90, color: "grey"}],
              {w: 100, h: 50, rotate:false, angle:0, color: "red"}],
               {w: 100, h: 30, rotate:false, angle:0, color: "pink"}],
```

```
  design: { w: 280, h: 100, margin: { h: 12,  v: 0 } }
  boxPadding: 5
}
```

5.

```
{
 boxes: [ {w: 20, h: 10, rotate:true, angle:90, color: "white"},
                {w: 40, h: 50, rotate:false, angle:0, color: "green"},
                {w: 100, h: 25, rotate:false, angle:0, color: "blue"}],
                 {w: 60, h: 80, rotate:true, angle:90, color: "grey"}],
                 {w: 100, h: 50, rotate:false, angle:0, color: "red"}],
                  {w: 100, h: 30, rotate:false, angle:0, color: "pink"}],
                 {w: 100, h: 25, rotate:false, angle:0, color: "black"}],



  design: { w: 280, h: 100, margin: { h: 12,  v: 0 } }
  boxPadding: 5
}
```