Chapter 3

Introduction to Polygon Modeling

Learning Objectives

After completing this chapter, you will be able to:

- *Create polygon primitives*
- *Work with various polygon modeling tools*

Figure 3-1 *The model of a computer mouse*

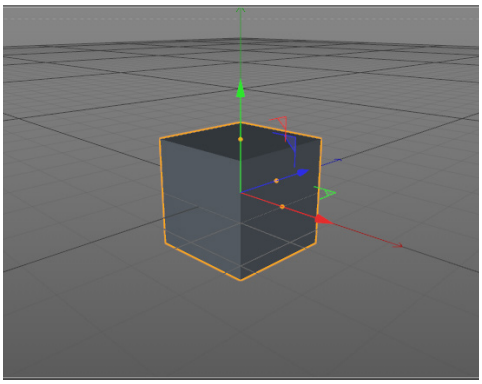

Figure 3-2 *Cube created in the Perspective viewport*

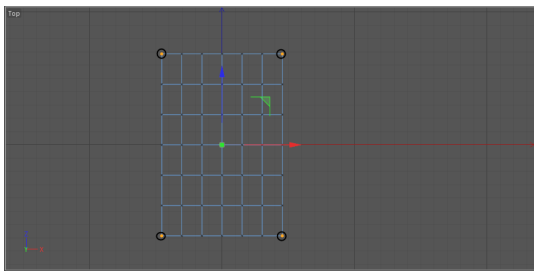

Figure 3-3 *The corner points of Computer mouse to be selected*

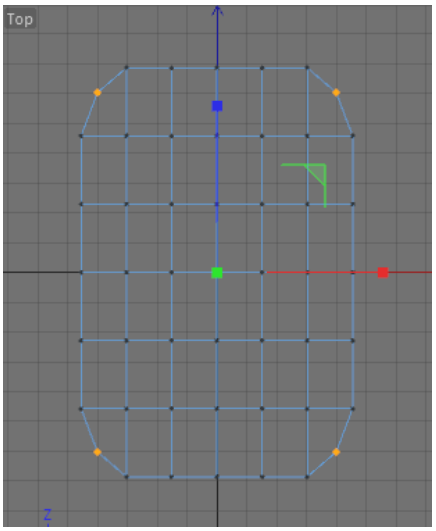

Figure 3-4 *Scaling the selected points of Computer mouse*

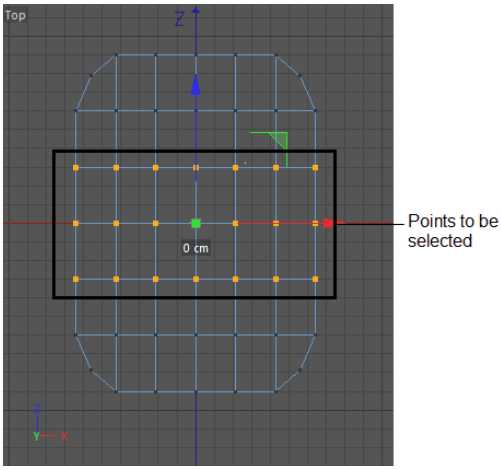

Figure 3-5 *The points to be selected*

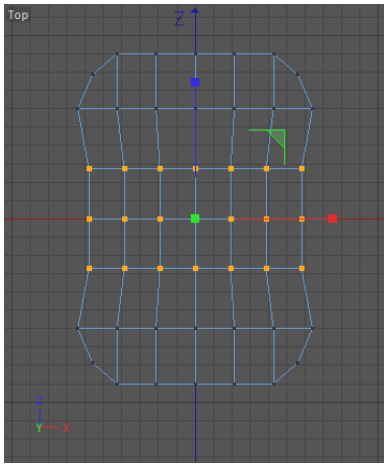

Figure 3-6 *Scaling the selected points of Computer mouse*

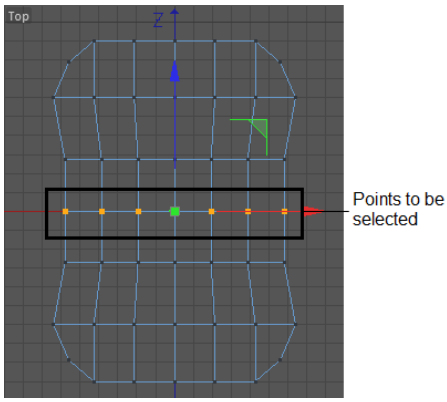

Figure 3-7 *The center points to be selected*

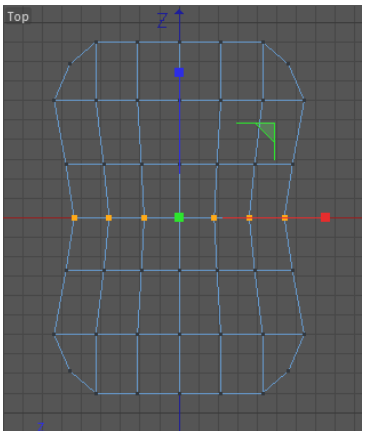

Figure 3-8 *Scaling the selected points of Computer mouse*

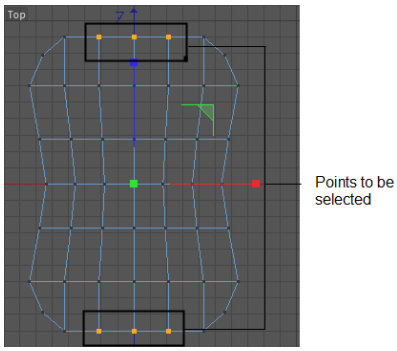

Figure 3-9 *The selected points of Computer mouse*

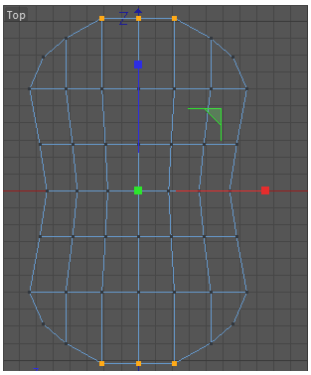

Figure 3-10 *Scaling the selected points of Computer mouse*

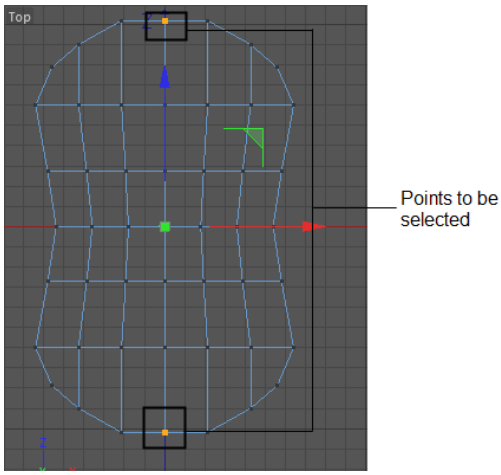

Figure 3-11 *The top and bottom center points of Computer mouse selected*

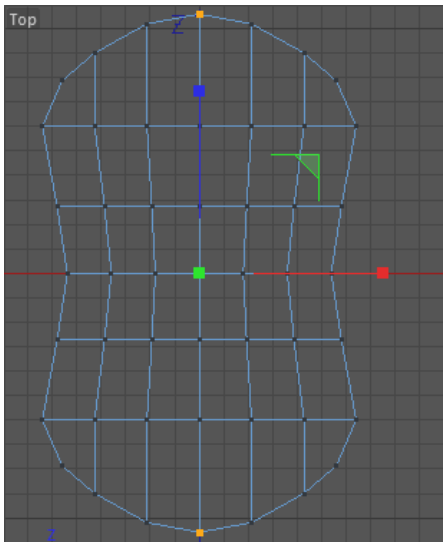

Figure 3-12 *Scaling the selected points of Computer mouse*

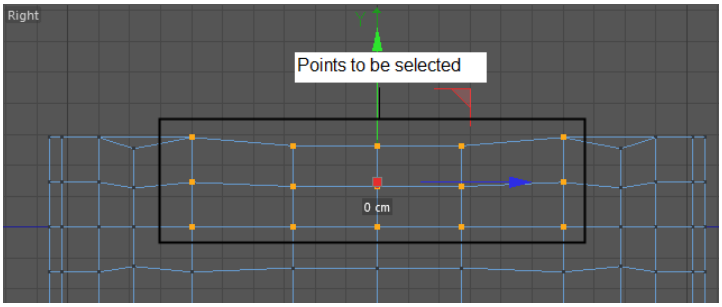

Figure 3-13 *The points to be selected*

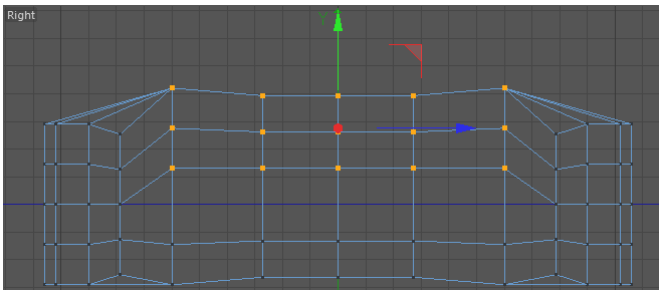

Figure 3-14 *Moving the selected points of Computer mouse*

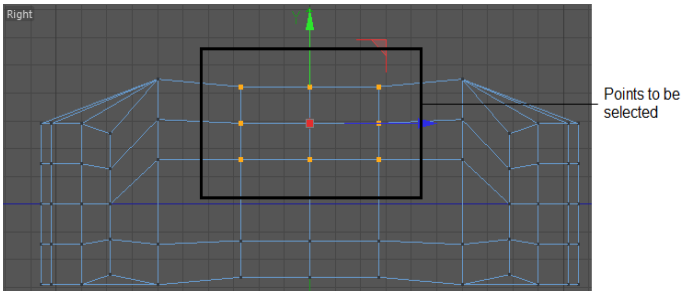

Figure 3-15 *The selected points of Computer mouse*

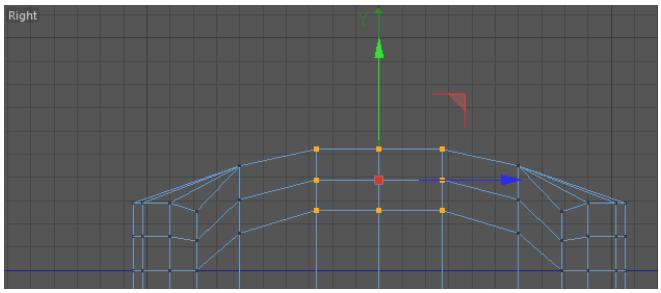

Figure 3-16 *Moving the selected points of Computer mouse*

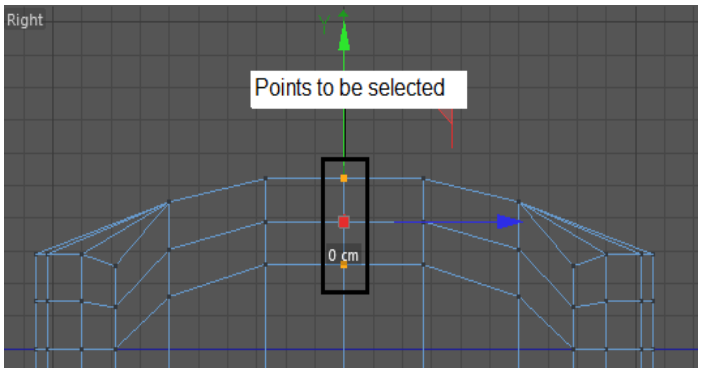

Figure 3-17 *The top center points of Computer mouse selected*

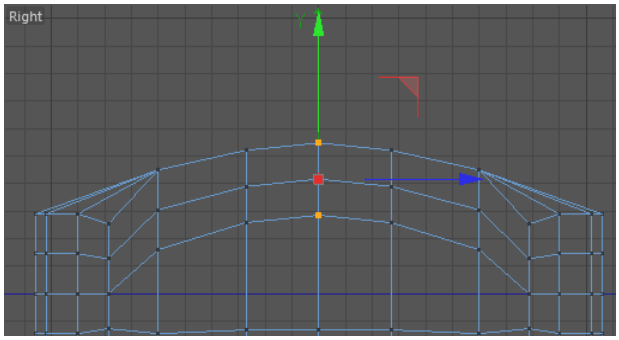

Figure 3-18 *Moving the selected points of Computer mouse*

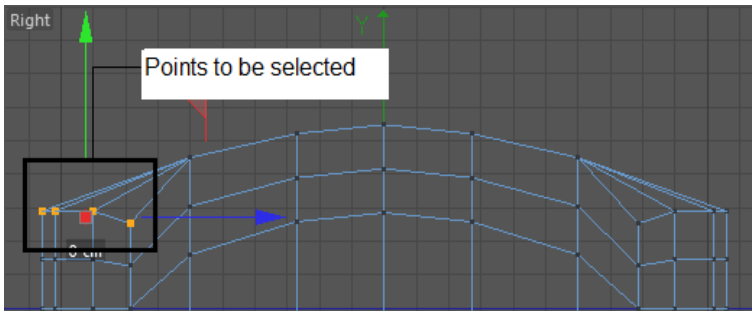

Figure 3-19 *The points to be selected*

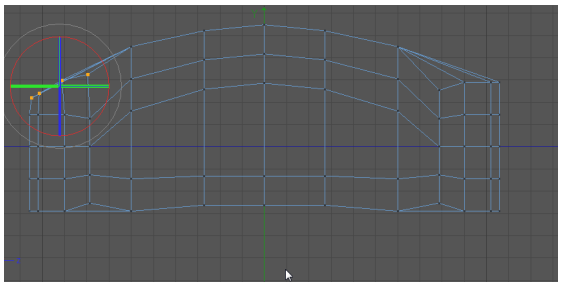

Figure 3-20 *Rotating the selected points of Computer mouse*

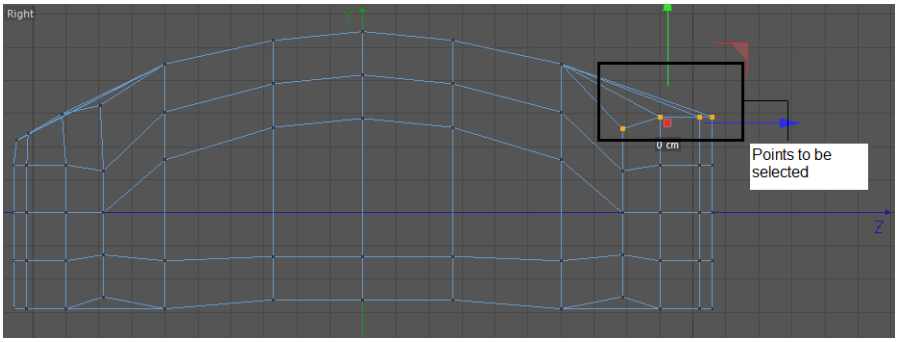

Figure 3-21 *The points to be selected*

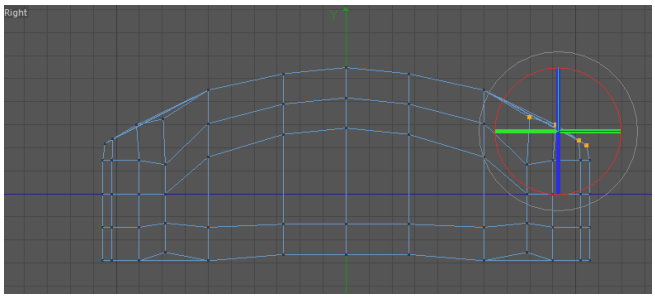

Figure 3-22 *Rotating the selected points of Computer mouse*

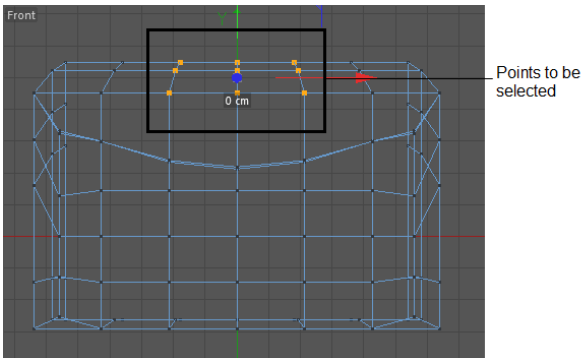

Figure 3-23 *The points to be selected*

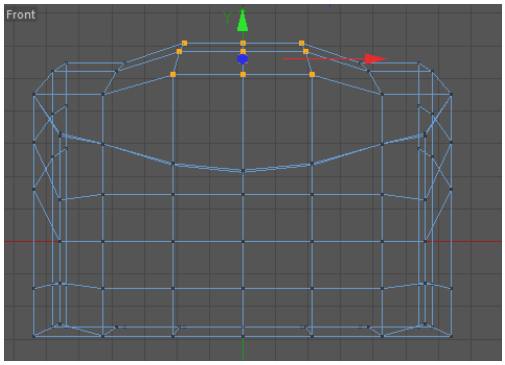

Figure 3-24 *Moving the selected points upward*

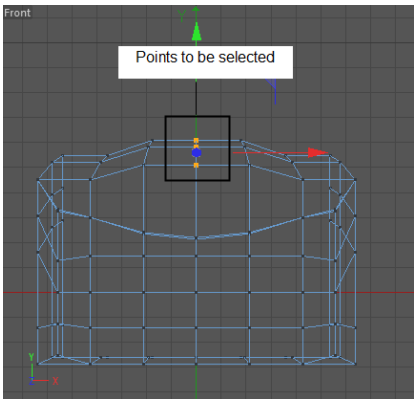

Figure 3-25 *The selected points of Computer mouse*

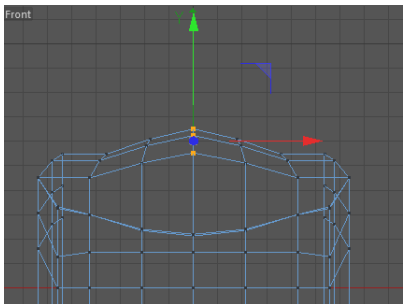

Figure 3-26 *Moving the selected points of Computer mouse*

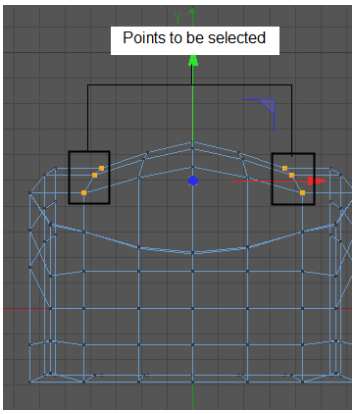

Figure 3-27 *The points to be selected*

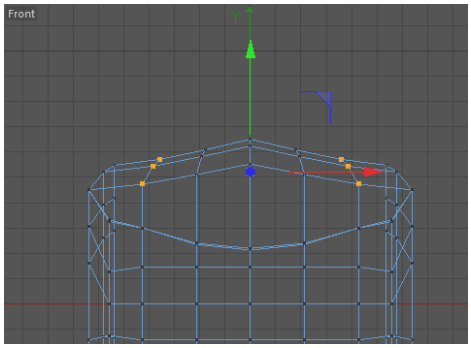

Figure 3-28 *Moving the selected points of Computer mouse*

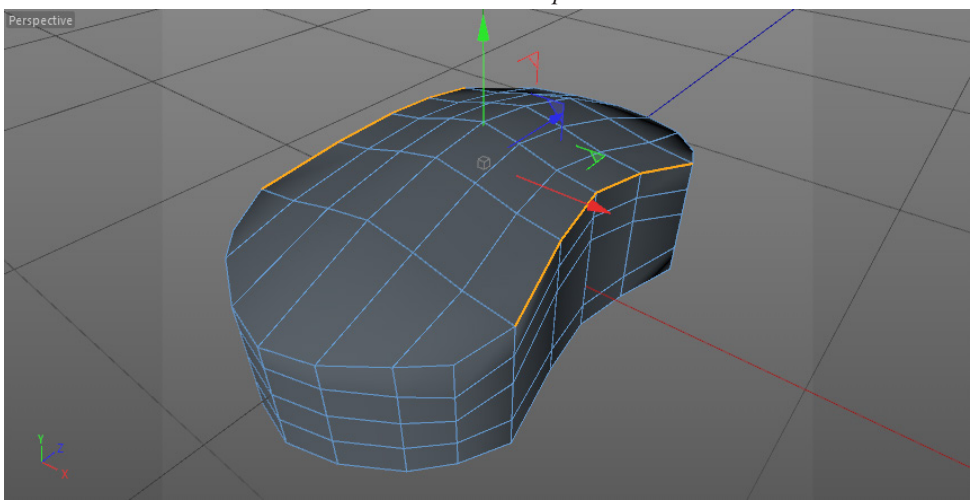

Figure 3-29 *The selected edges in the Perspective viewport*

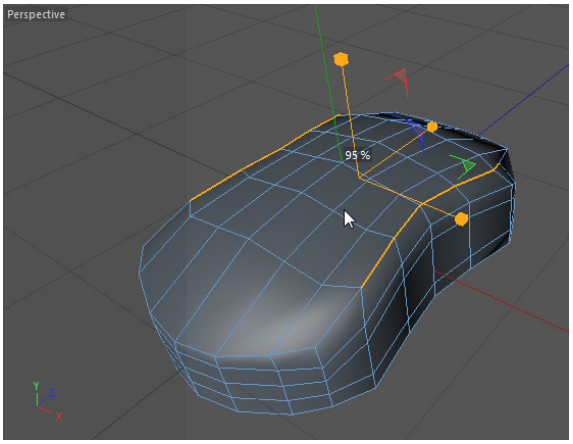

Figure 3-30 *Scaling down the edges of Computer mouse in the Perspective viewport*

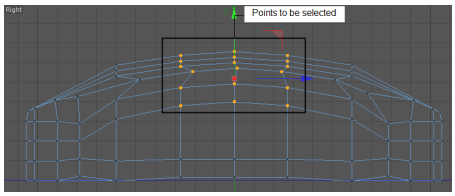

Figure 3-31 *The points to be selected*

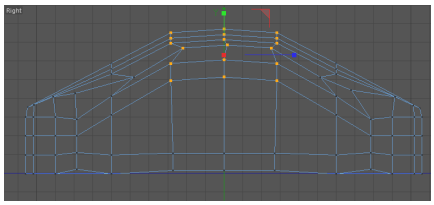

Figure 3-32 *Moving the selected points of Computer mouse*

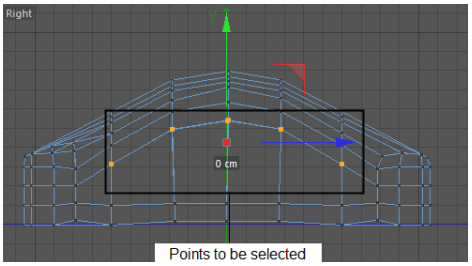

Figure 3-33 *The points to be selected*

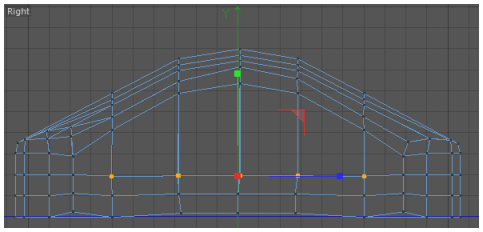

Figure 3-34 *Scaling the points of Computer mouse*

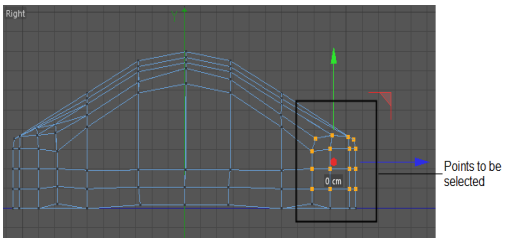

Figure 3-35 *The points of Computer mouse to be selected*

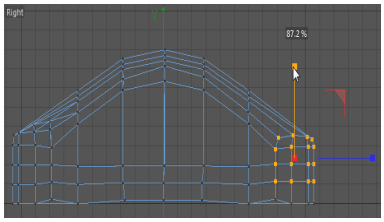

Figure 3-36 *Scaling the points of Computer mouse*

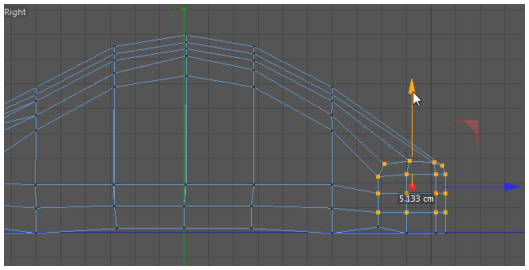

Figure 3-37 *Moving the selected points in the Right viewport*

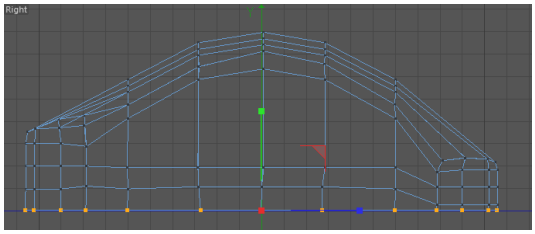

Figure 3-38 *Scaling the points of Computer mouse*

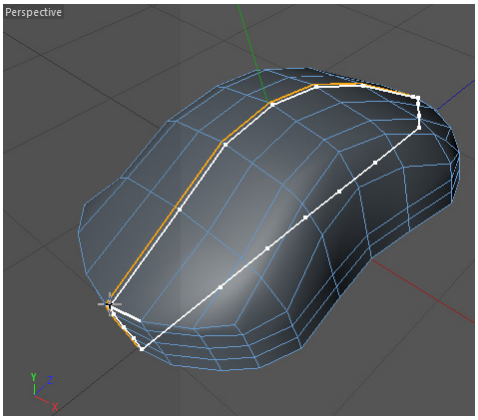

Figure 3-39 *Clicking on an edge of the Computer mouse*

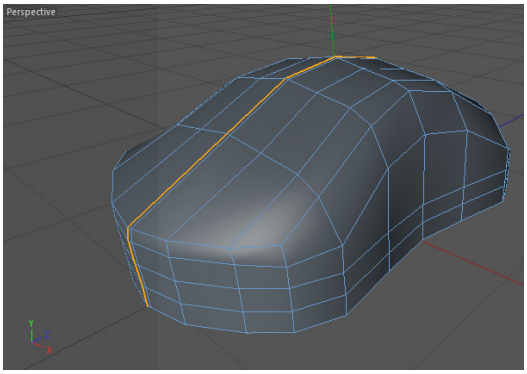

Figure 3-40 *A new edge loop added to Computer mouse*

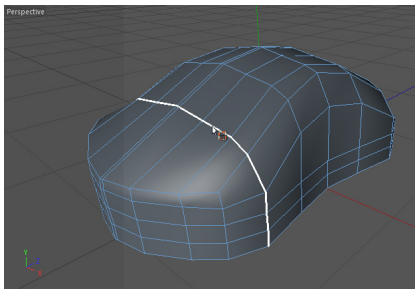

Figure 3-41 *The selected edge loop of Computer mouse*

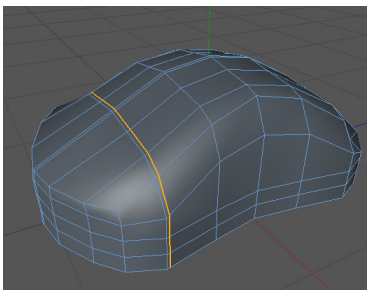

Figure 3-42 *A new edge added to Computer mouse*

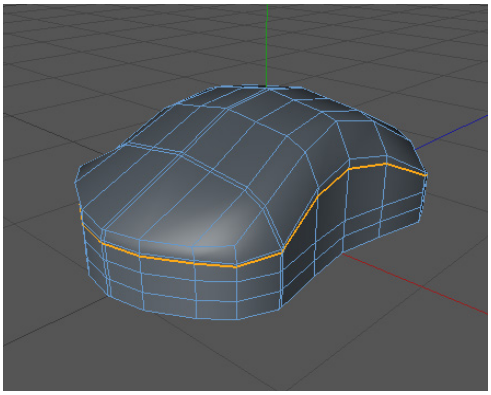

Figure 3-43 *A new edge added to Computer mouse*

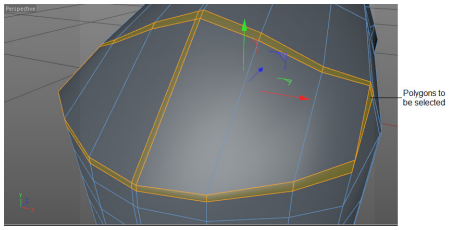

Figure 3-44 *The polygons selected*

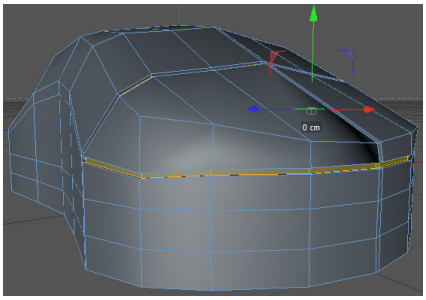

Figure 3-45 *The extruded polygons of Computer mouse*

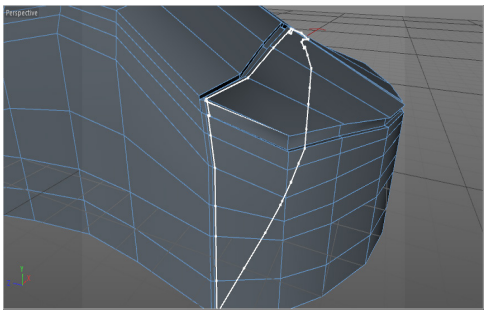

Figure 3-46 *The mouse pointer placed on Computer mouse*

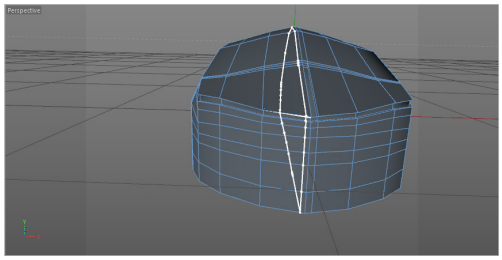

Figure 3-47 *The mouse pointer placed on Computer mouse*

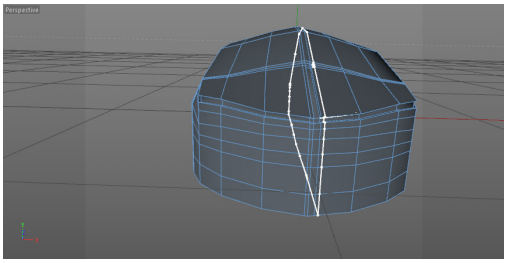

Figure 3-48 *The mouse pointer placed on Computer mouse*

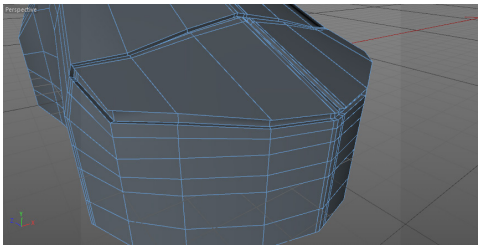

Figure 3-49 *The edges added to Computer mouse*

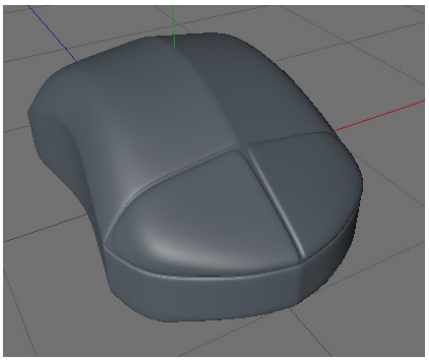

Figure 3-50 *The smoothened Computer mouse*

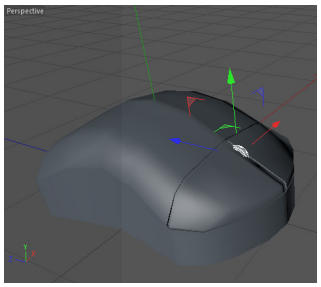

Figure 3-51 *The Scroll wheel placed on Computer mouse*

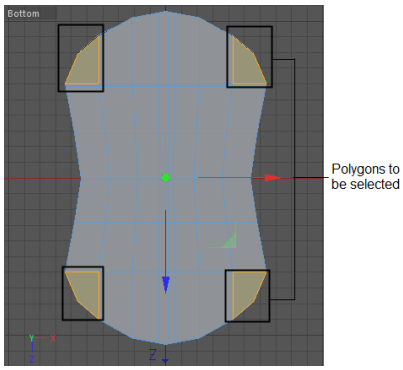

Figure 3-52 *The selected polygons of Computer mouse*

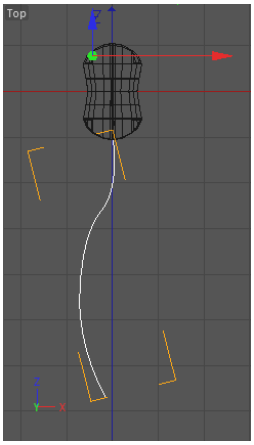

Figure 3-53 *Spline created in the Top viewport*

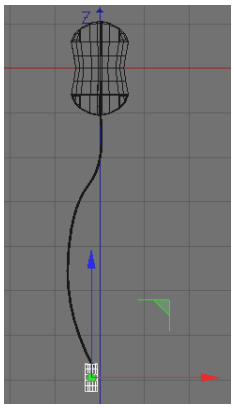

Figure 3-54 *Cube placed in the Top viewport*

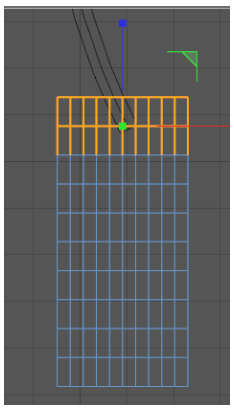

Figure 3-55 *The edges to be selected in the Top viewport*

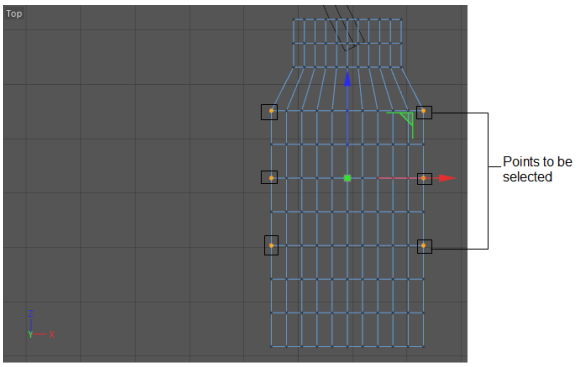

Figure 3-56 *The points to be selected*

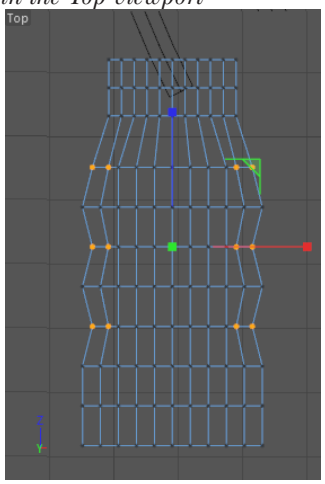

Figure 3-57 *Scaling the selected points*

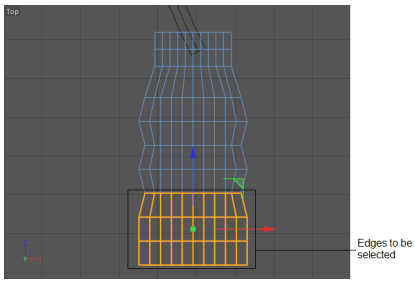

Figure 3-58 *The edges selected*

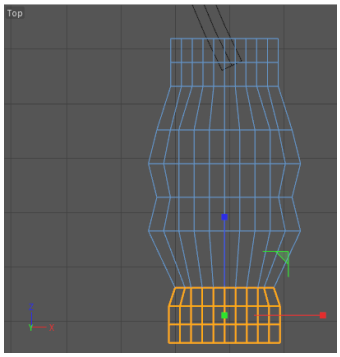

Figure 3-59 *Scaling the selected edges*

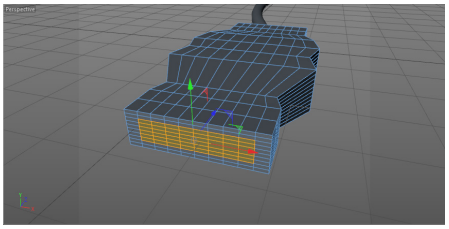

Figure 3-60 *The polygons to be selected*

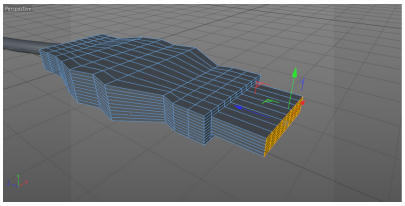

Figure 3-61 *The extruded edge loop*

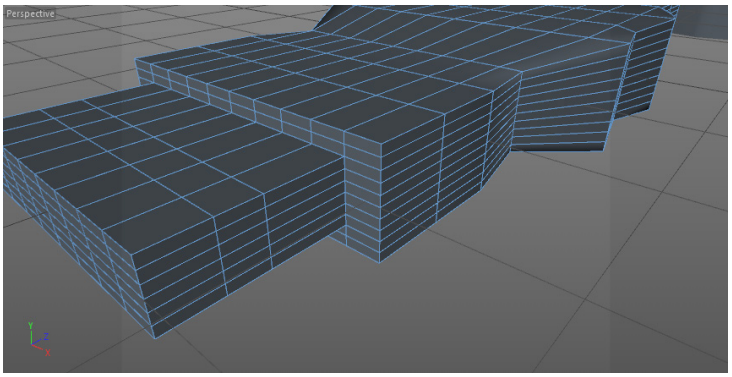

Figure 3-62 *The edges to be added*

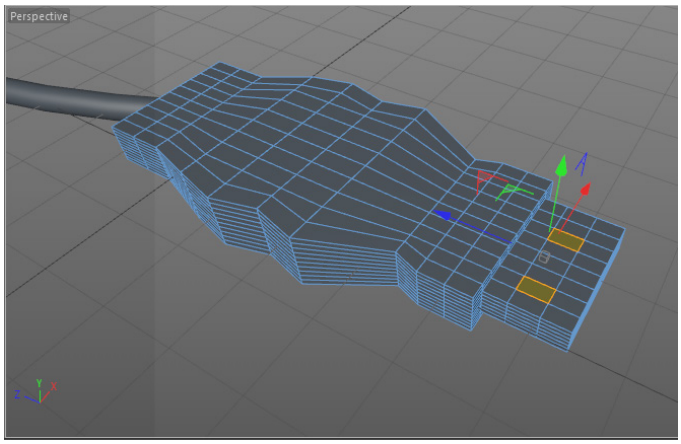

Figure 3-63 *The polygons to be selected*

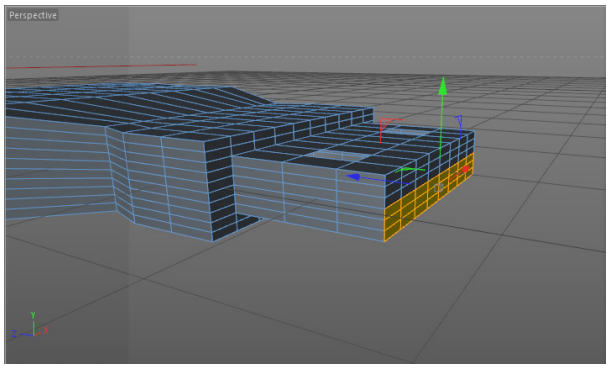

Figure 3-64 *The selected polygons*

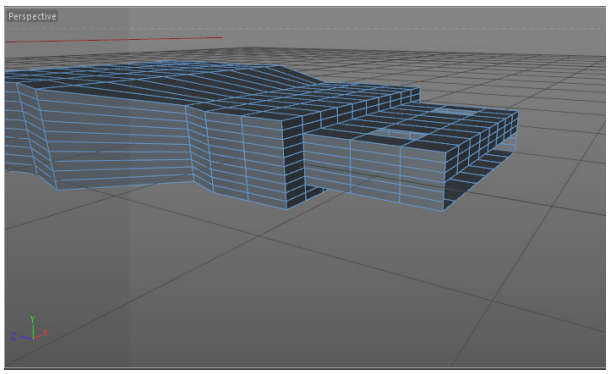

Figure 3-65 *The deleted polygons*

Figure 3-66 *The model of computer table*

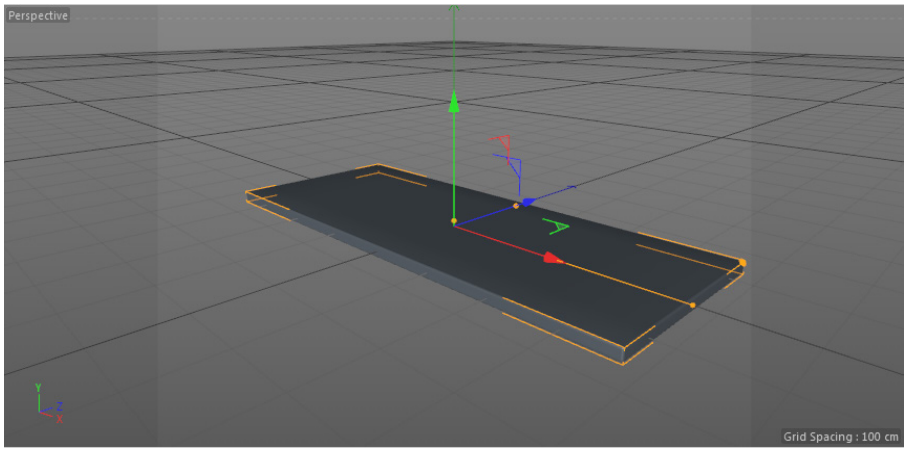

Figure 3-67 *The Computer table in the Perspective viewport*

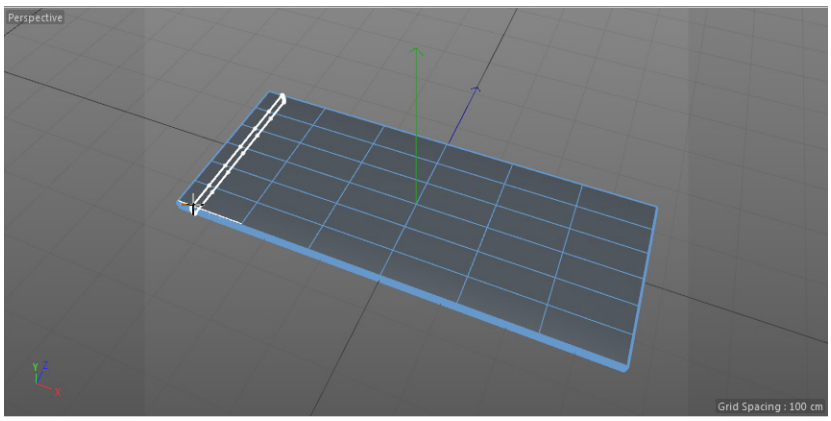

Figure 3-68 *Clicking on the edge to create an edge loop*

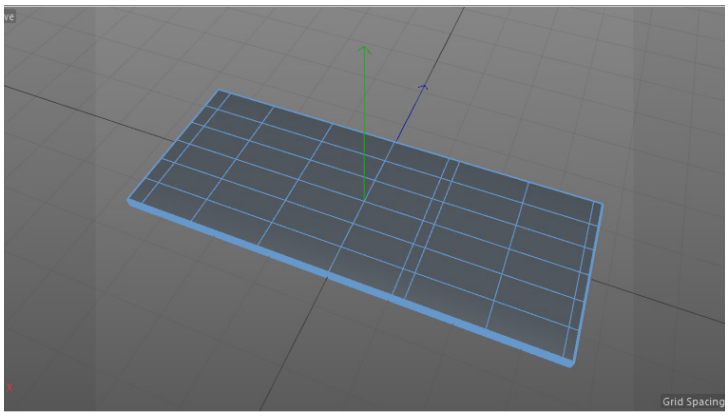

Figure 3-69 *The edge loops are added*

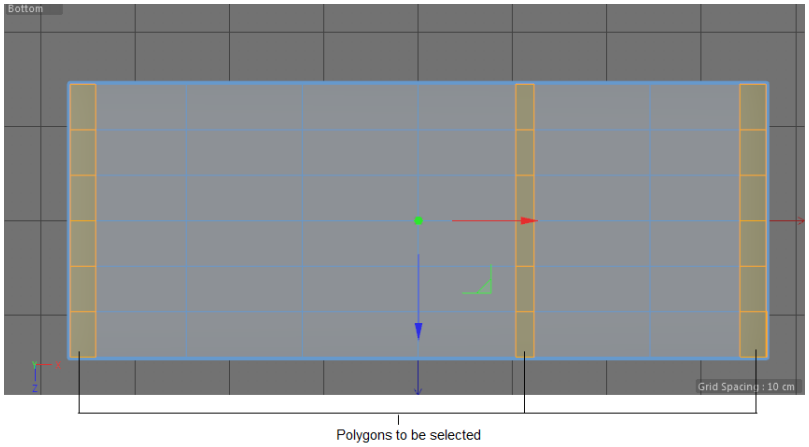

Figure 3-70 *The selected polygons of Computer table*

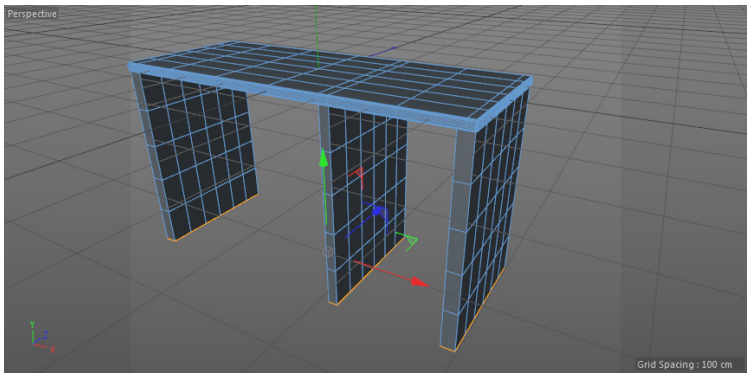

Figure 3-71 *The selected polygons extruded in the Perspective viewport*

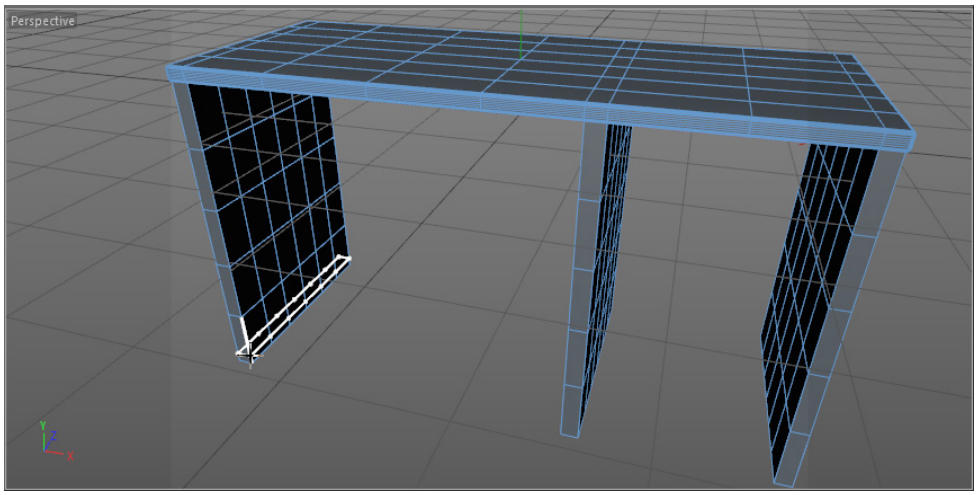

Figure 3-72 *Clicking on edge to create new edge loop*

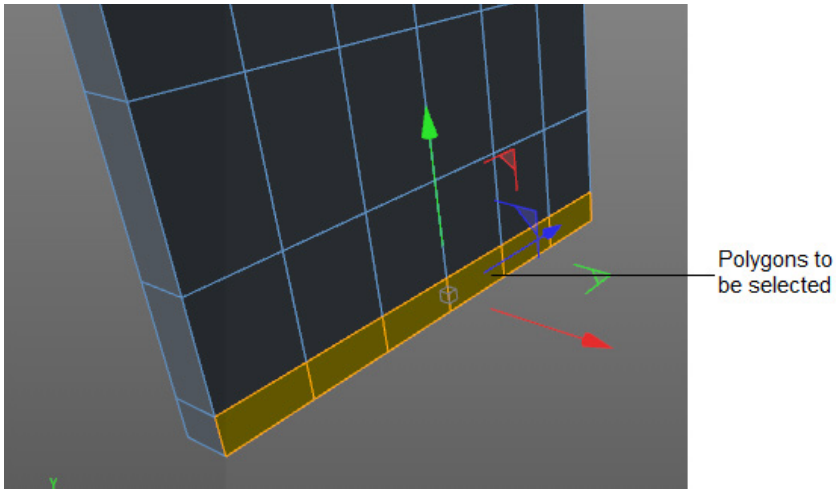

Figure 3-73 *The selected polygons of Computer table*

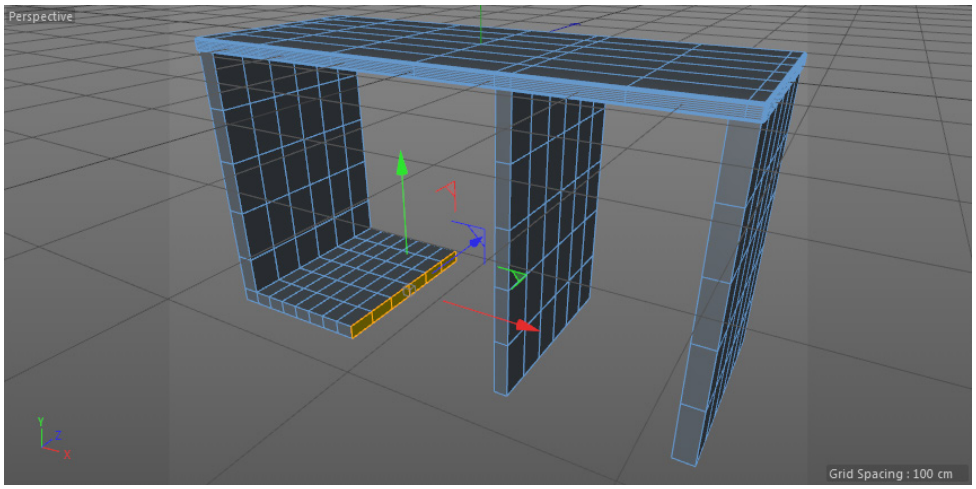

Figure 3-74 *The selected polygons extruded in the Perspective viewport*

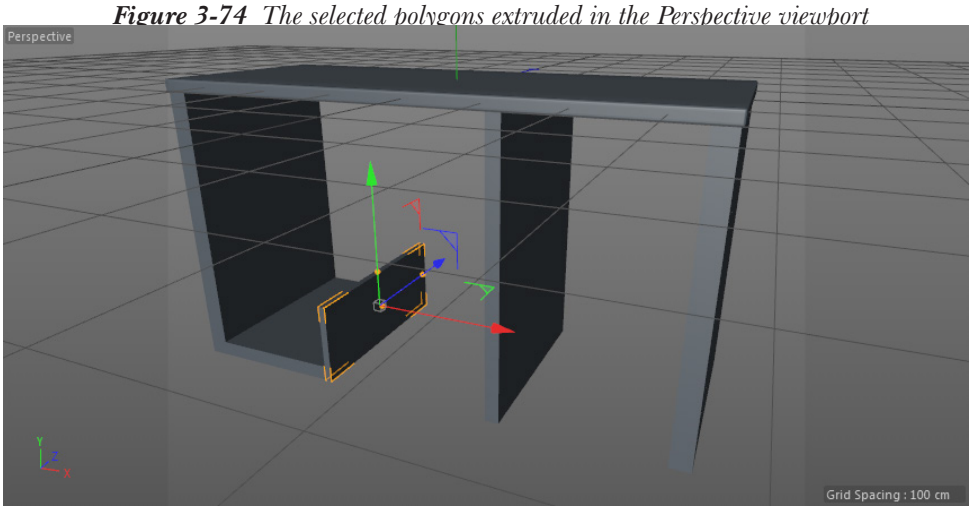

Figure 3-75 *Cube aligned in Perspective viewport*

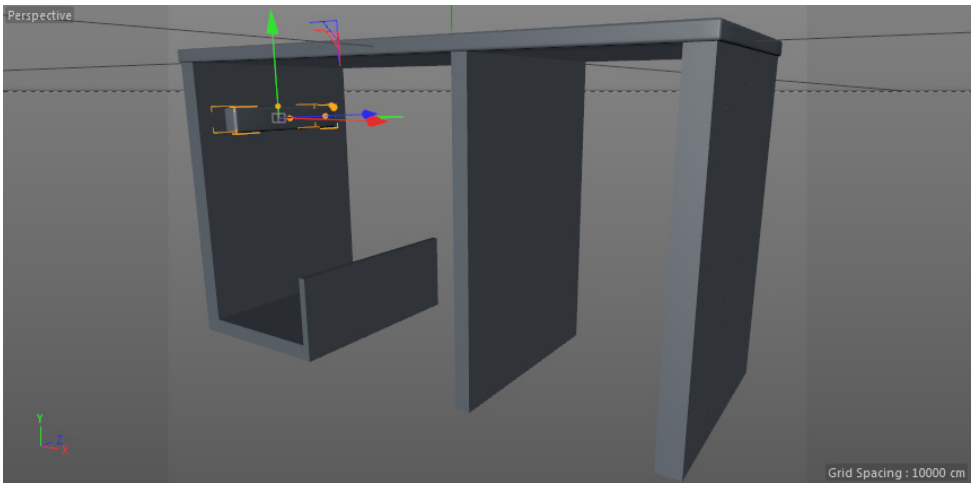

Figure 3-76 *Cube.1 positioned in the Perspective viewport*

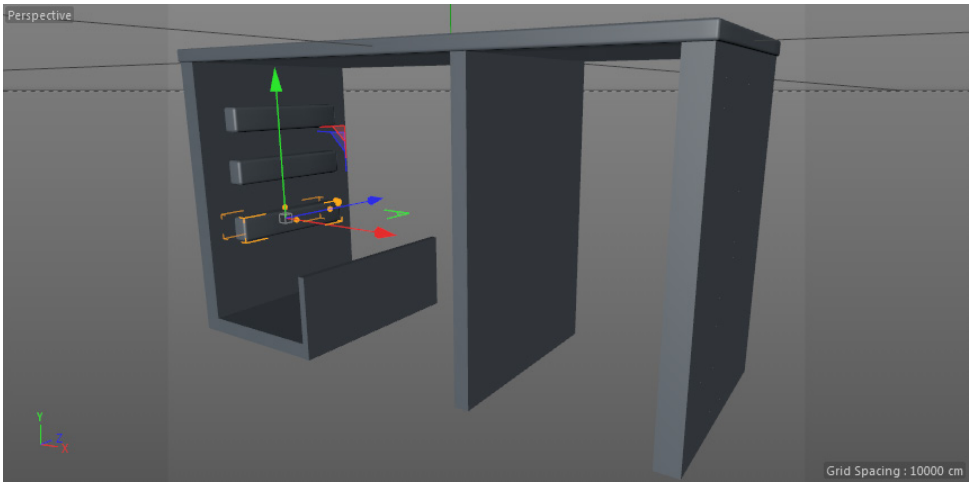

Figure 3-77 *Left side positioned in the Perspective viewport*

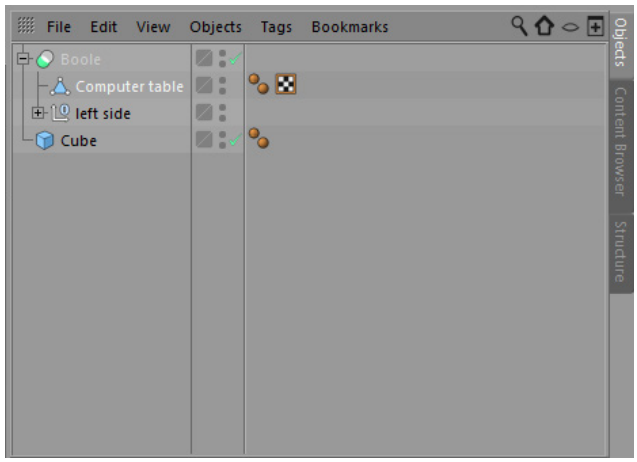

Figure 3-78 *Boole connected to left side of the Computer table*

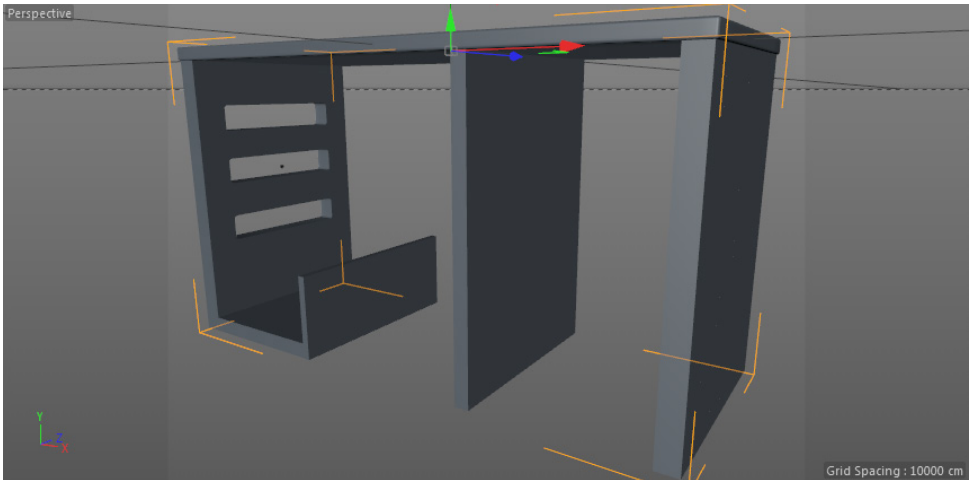

Figure 3-79 *The holes created in the side support of the Computer table*

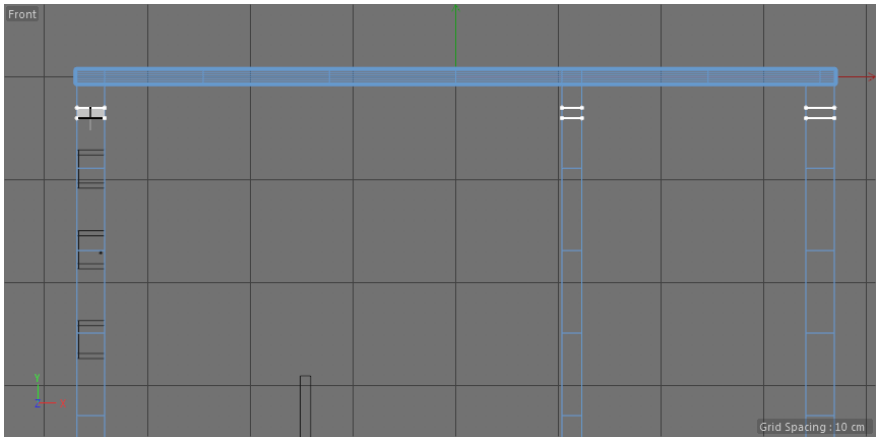

Figure 3-80 *Clicking on edge*

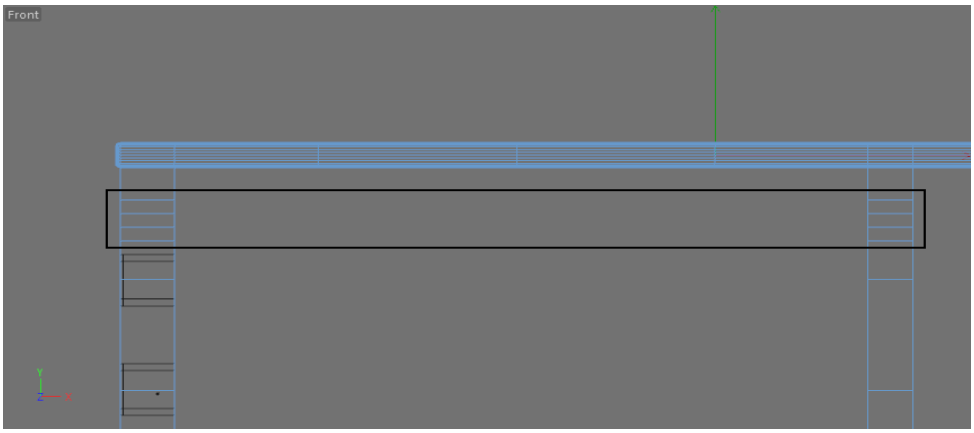

Figure 3-81 *Four new edge loops added to the Computer table*

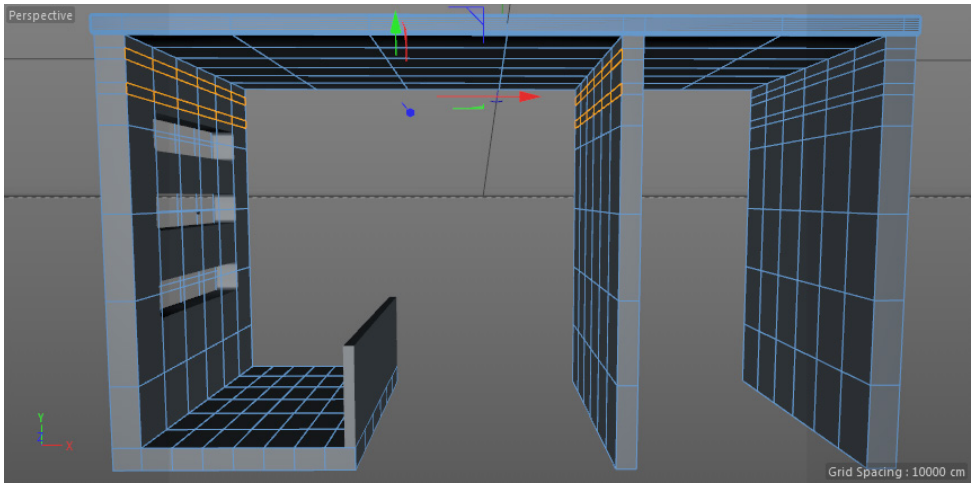

Figure 3-82 *The selected polygons of Computer table*

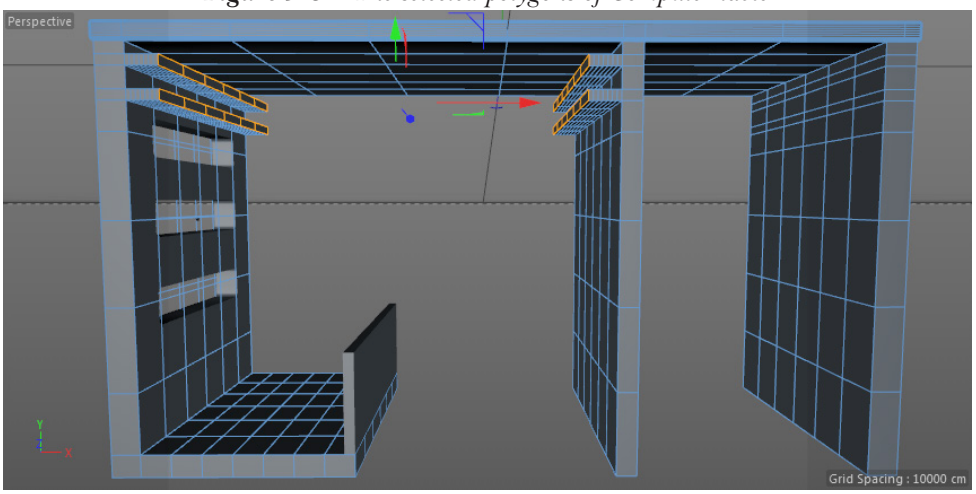

Figure 3-83 *The selected polygons extruded in the Perspective viewport*

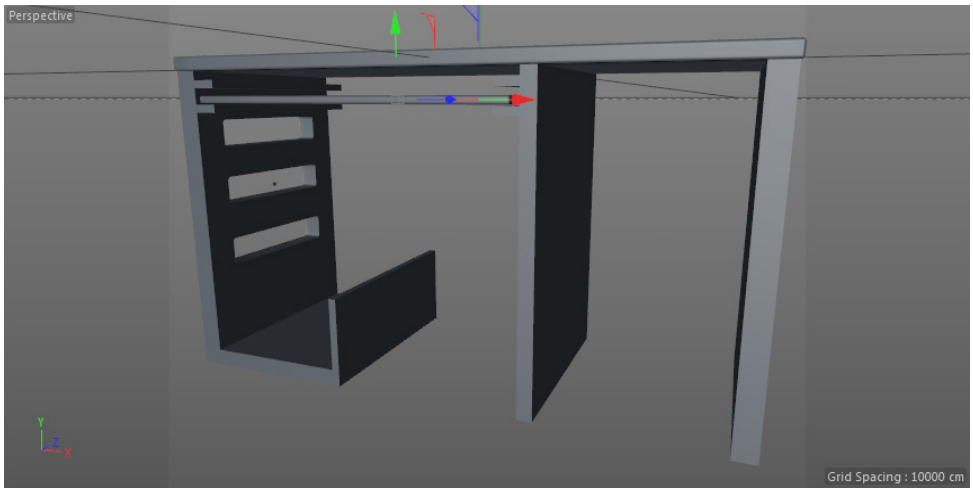

Figure 3-84 *The Keyboard support of Computer table*

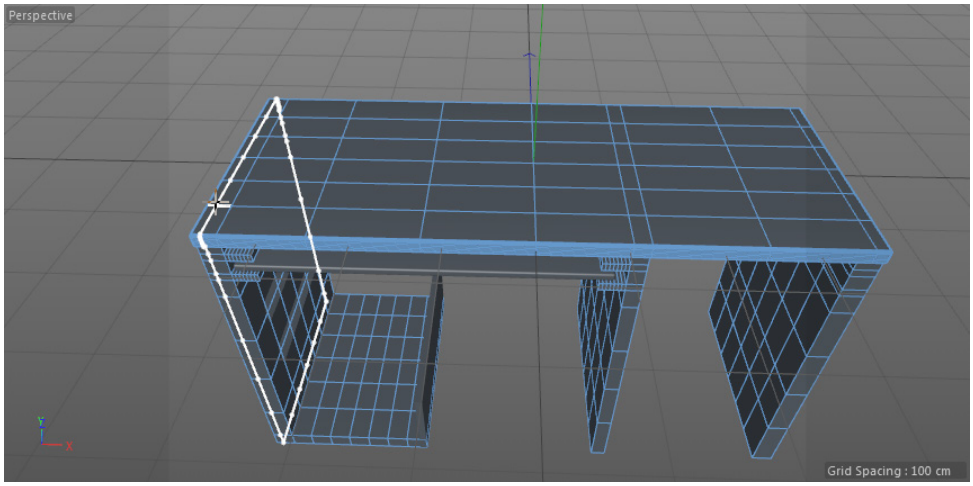

Figure 3-85 *Clicking on edge to create new edge loop*

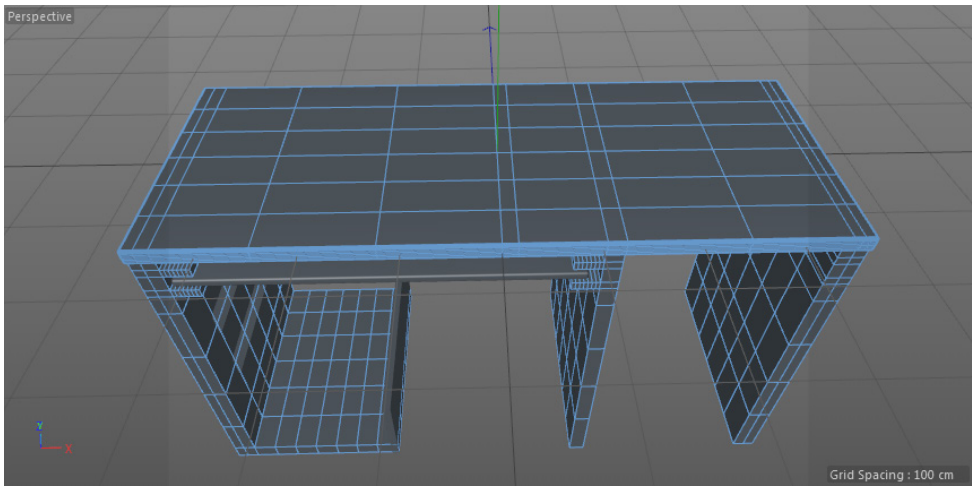

Figure 3-86 *Another edge loop added to Computer table*

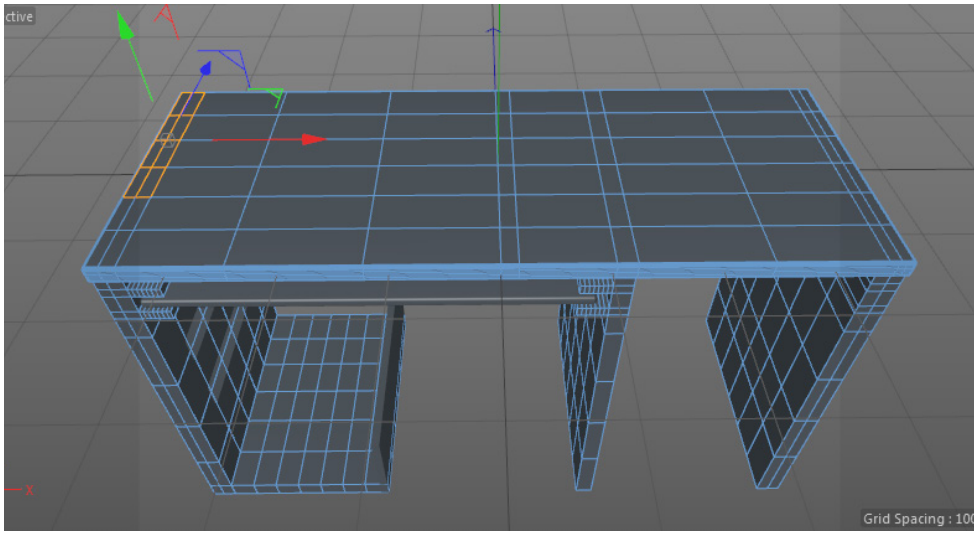

Figure 3-87 *The selected polygons of Computer table*

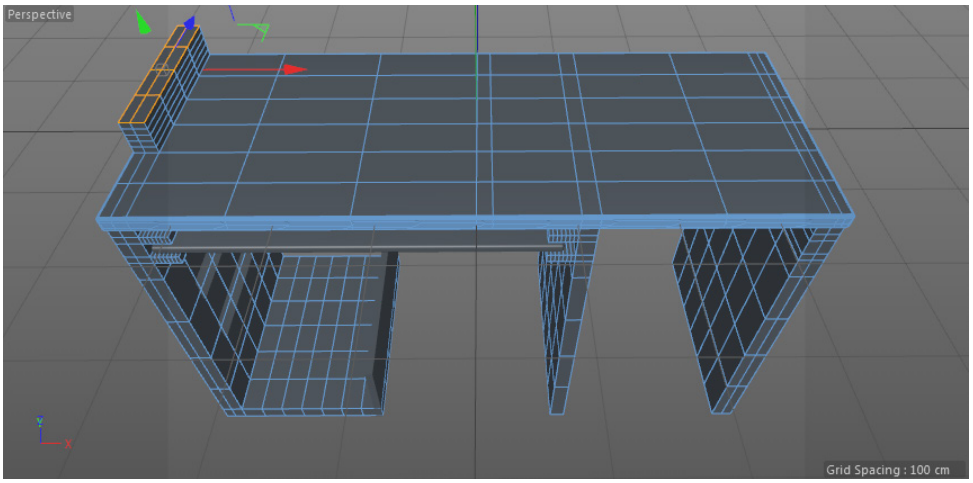

Figure 3-88 *The selected polygons extruded in the Perspective viewport*

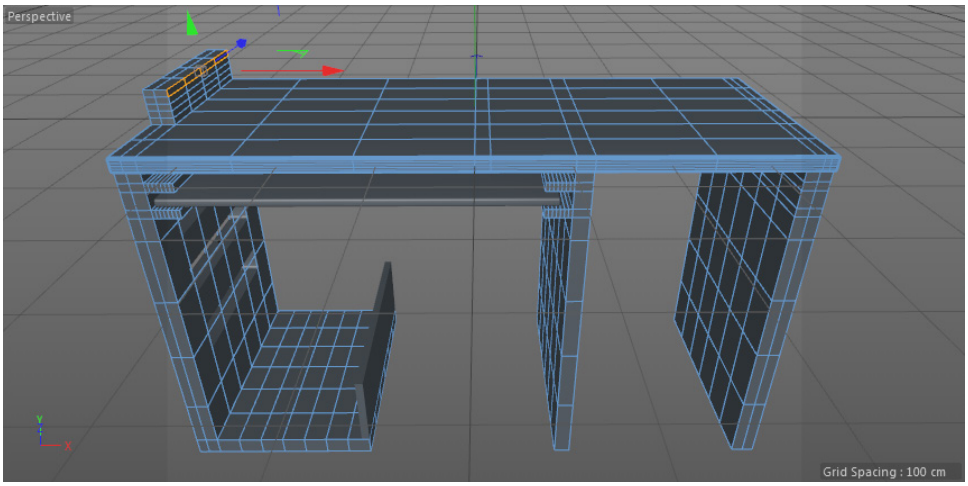

Figure 3-89 *The selected polygons of Computer table*

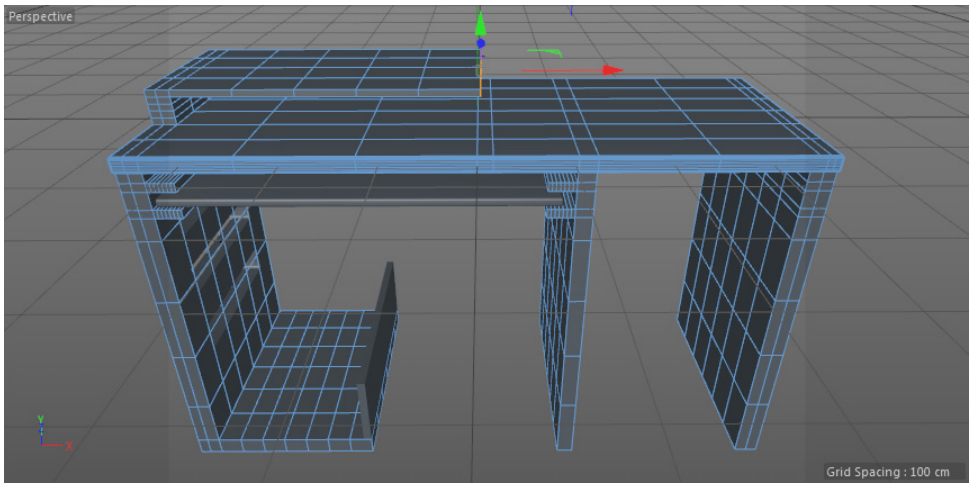

Figure 3-90 *The selected polygons extruded in the Perspective viewport*

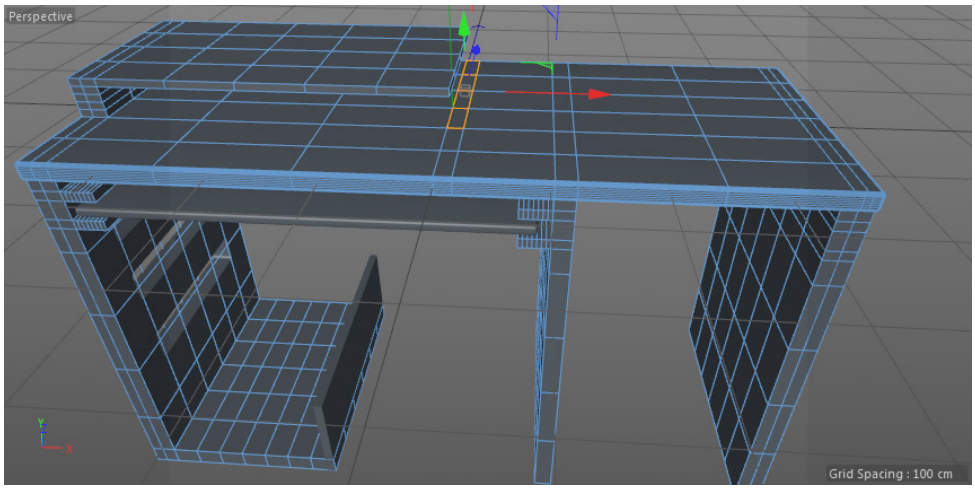

Figure 3-91 *The selected polygons of Computer table*

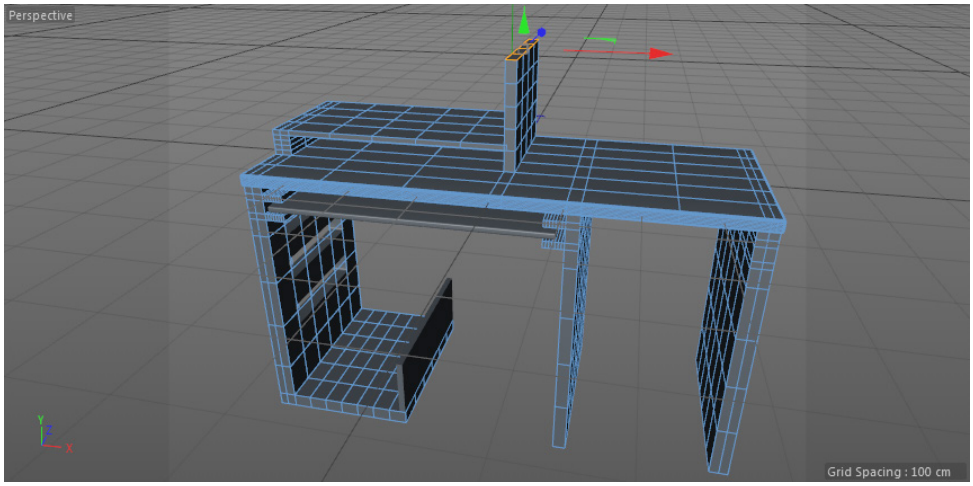

Figure 3-92 *The selected polygons extruded in the Perspective viewport*

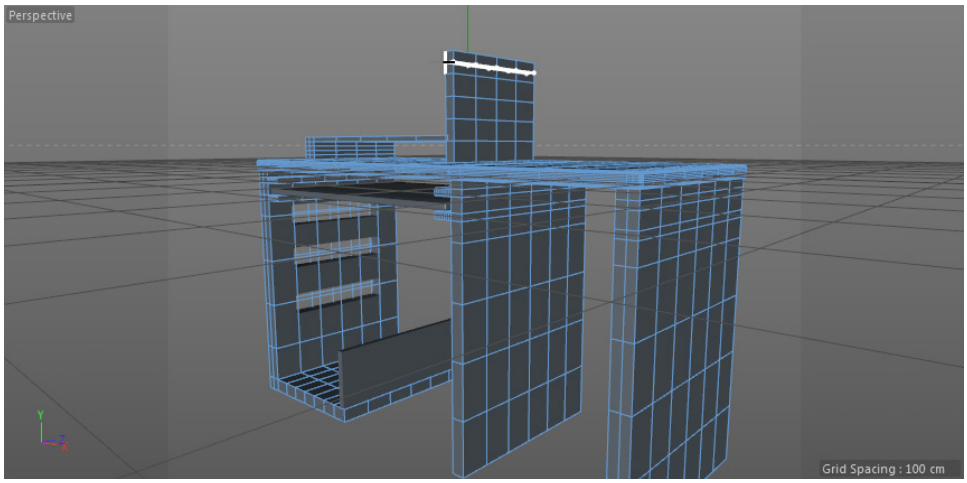

Figure 3-93 *Clicking on edge to create new edge loop*

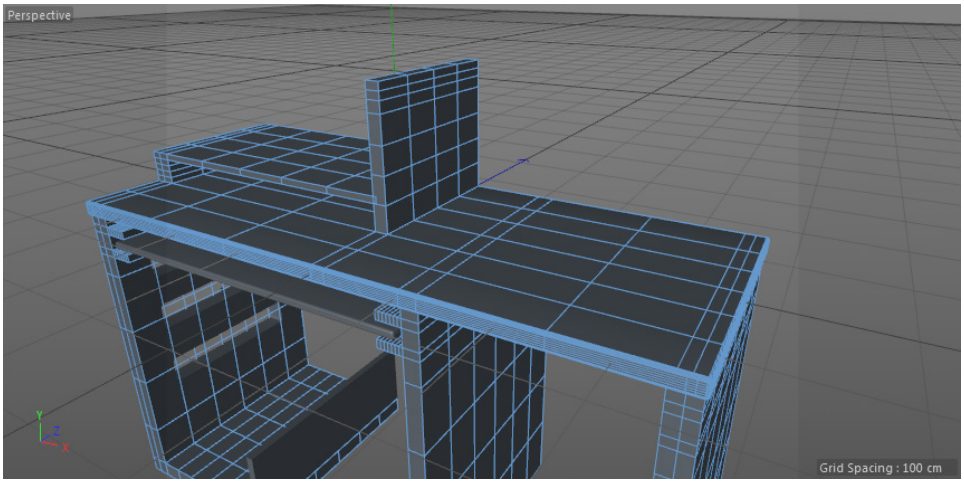

Figure 3-94 *Two new edge loops added to Computer table*

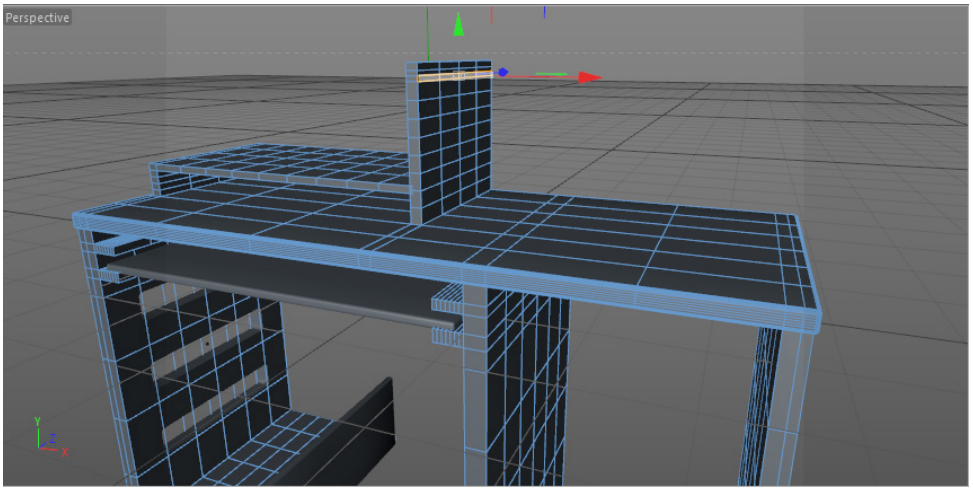

Figure 3-95 *The selected polygons of Computer table*

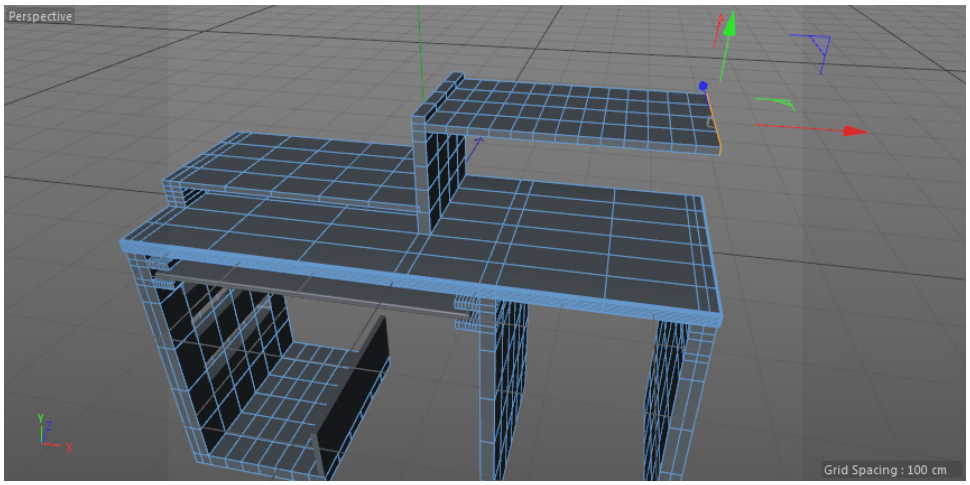

Figure 3-96 *The selected polygons extruded in the Perspective viewport*

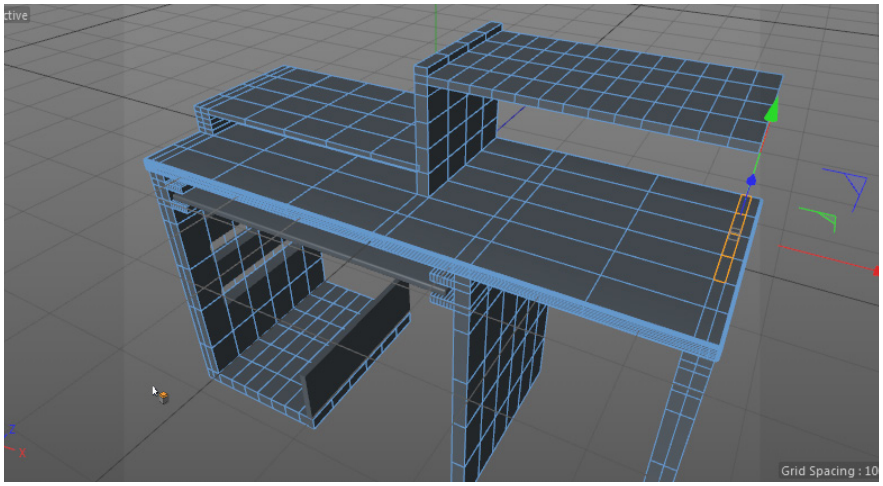

Figure 3-97 *The selected polygons of Computer table*

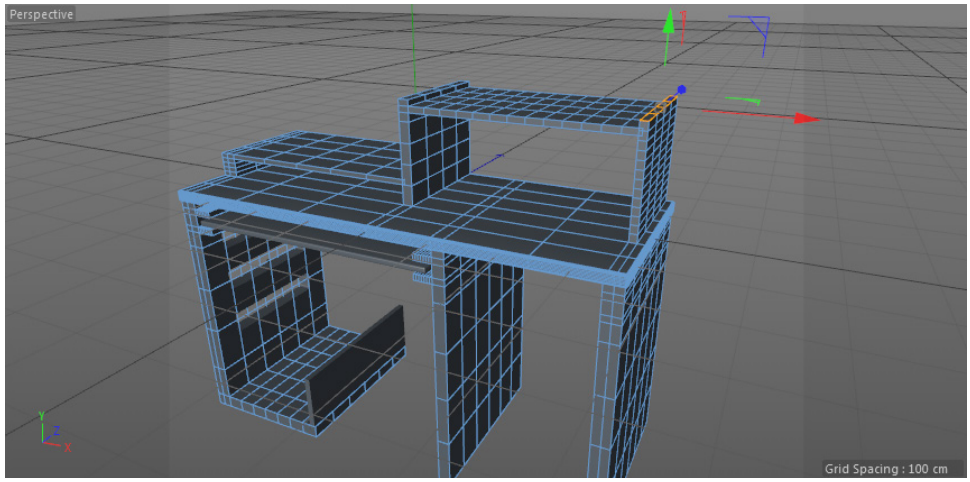

Figure 3-98 *The selected polygons extruded in the Perspective viewport*

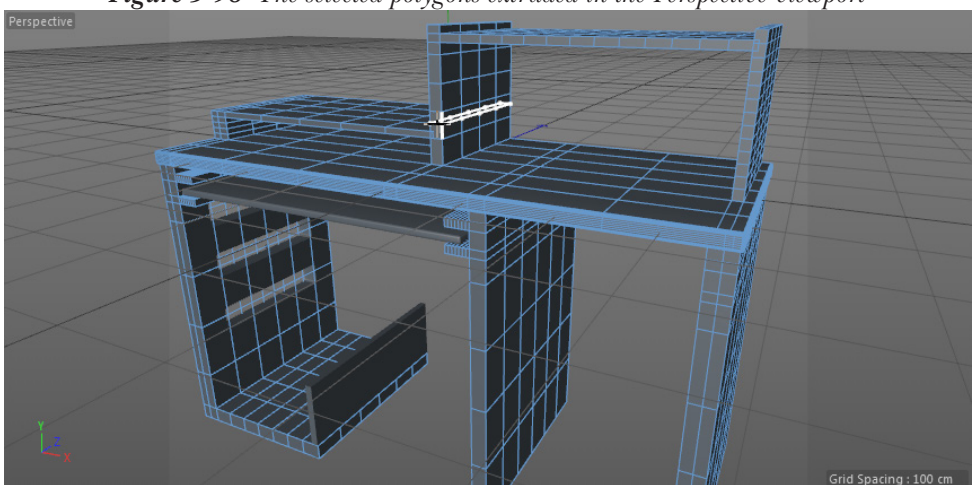

Figure 3-99 *Clicking on edge to create new edge loop*

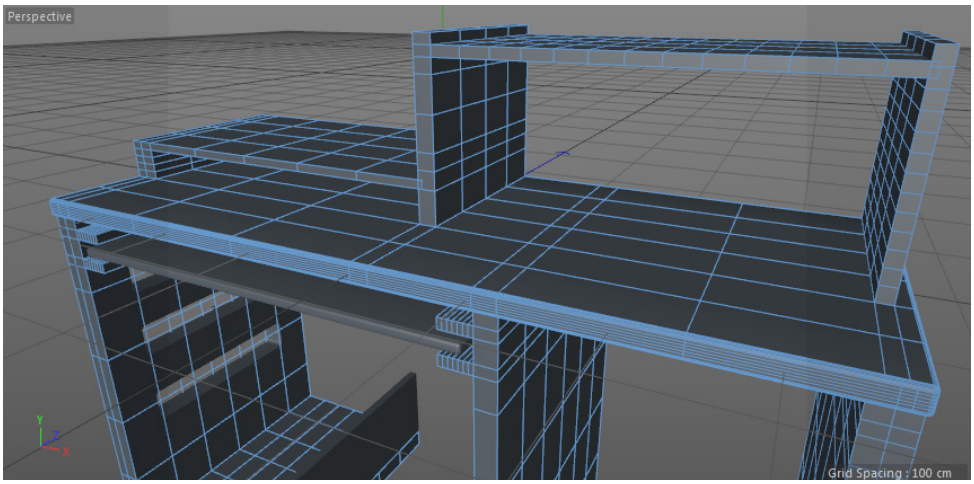

Figure 3-100 *The new edge loop added to the Computer table*

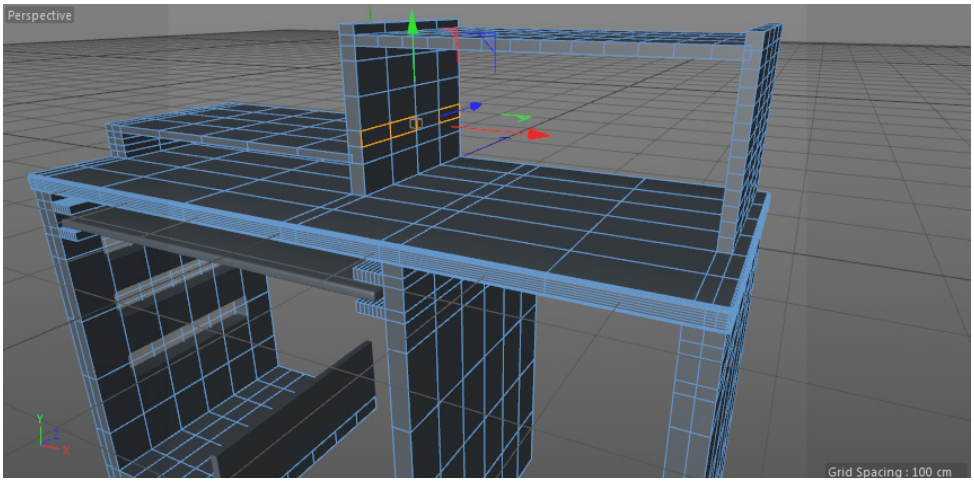

Figure 3-101 *The selected polygons of Computer table*

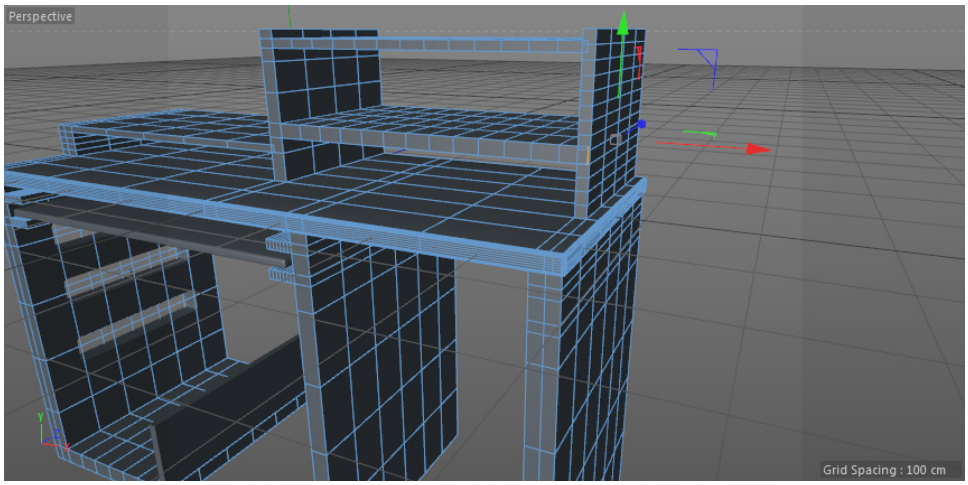

Figure 3-102 *The selected polygons extruded in the Perspective viewport*

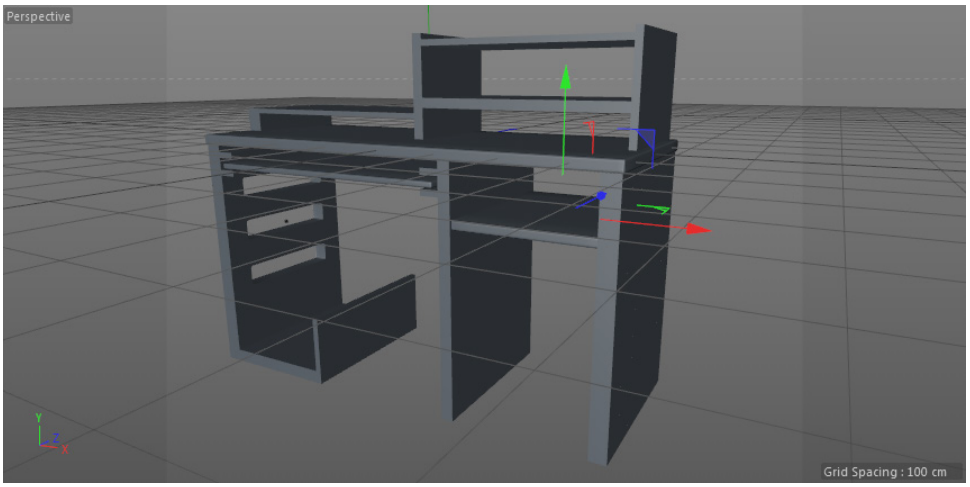

Figure 3-103 *Shelf1 positioned in the Perspective viewport*

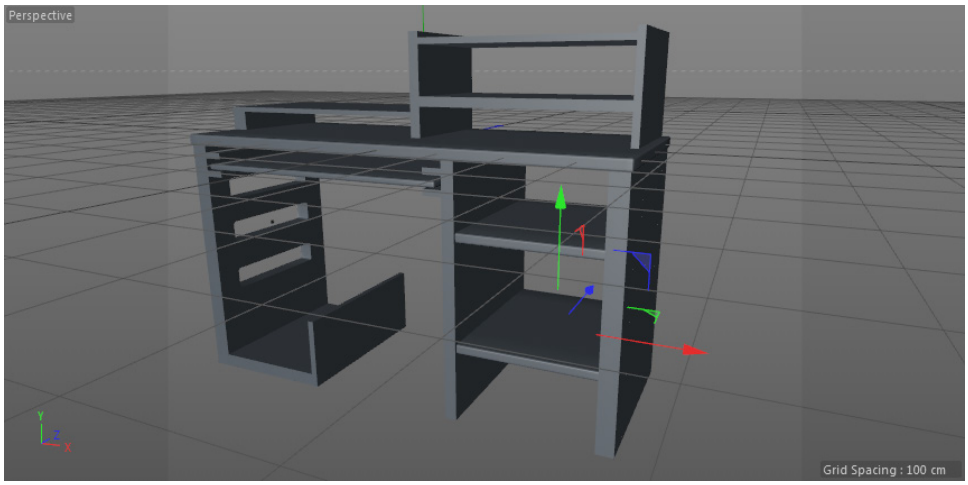

Figure 3-104 *Shelf1.1 positioned in the Perspective viewport*

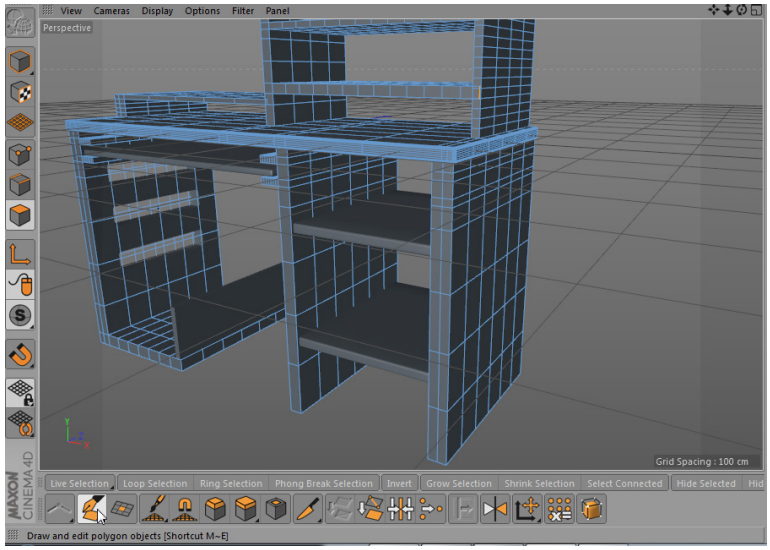

Figure 3-105 *Choosing the* ***Polygon Pen*** *tool from the Modeling Tool Palette*

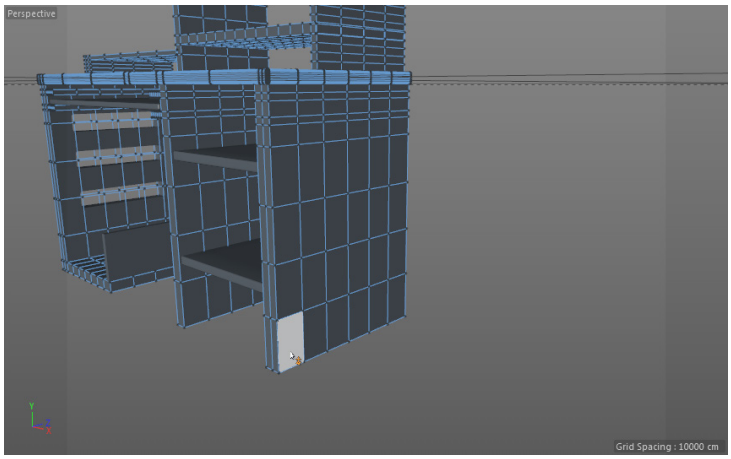

Figure 3-106 *The highlighted polygon*

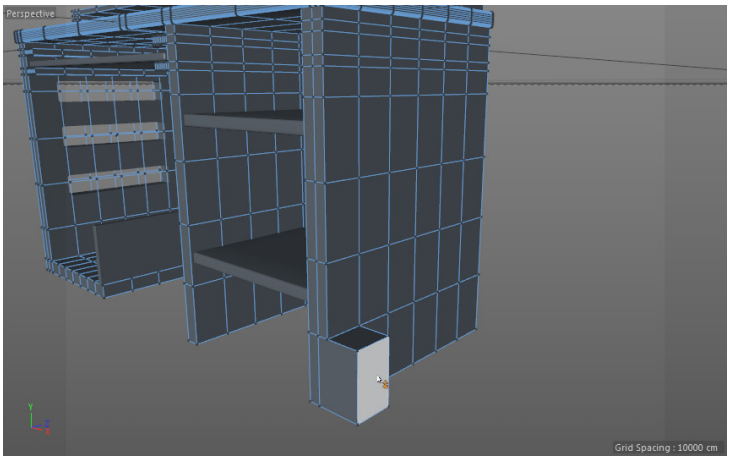

Figure 3-107 *Dragging the highlighted polygon*

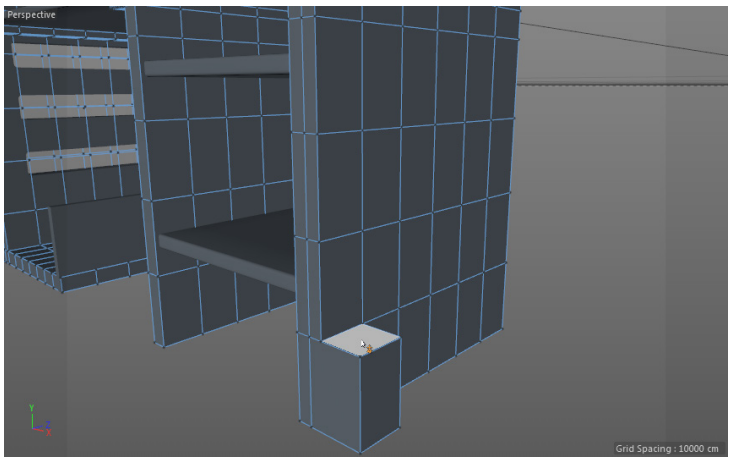

Figure 3-108 *The highlighted polygon of magazine stand*

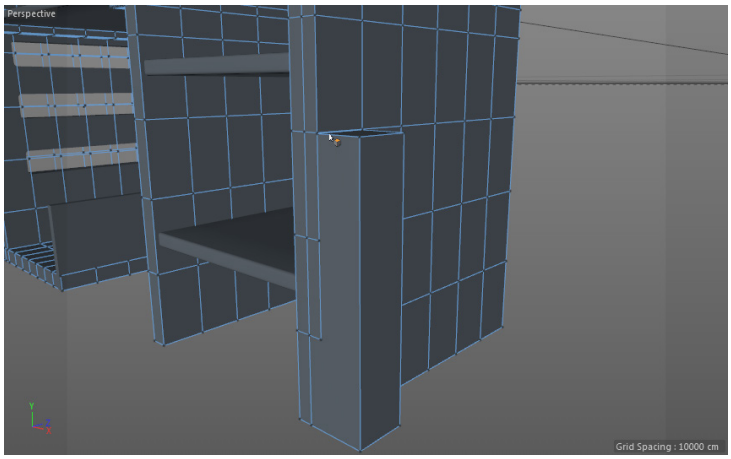

Figure 3-109 *Dragging the highlighted polygon*

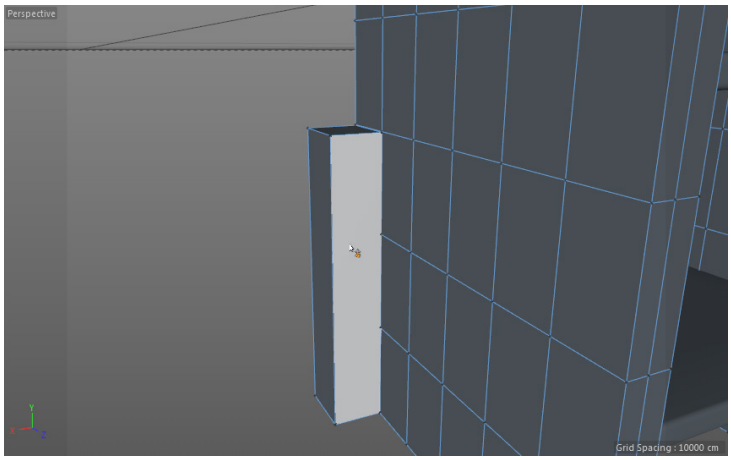

Figure 3-110 *Highlighted polygon*

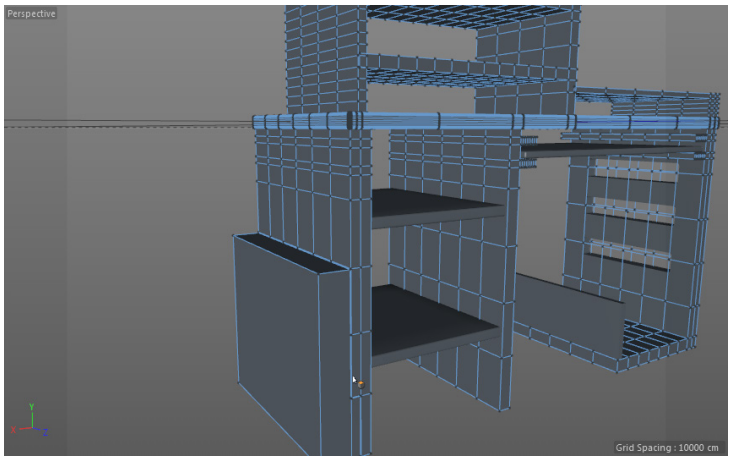

Figure 3-111 *Dragging the highlighted polygon*

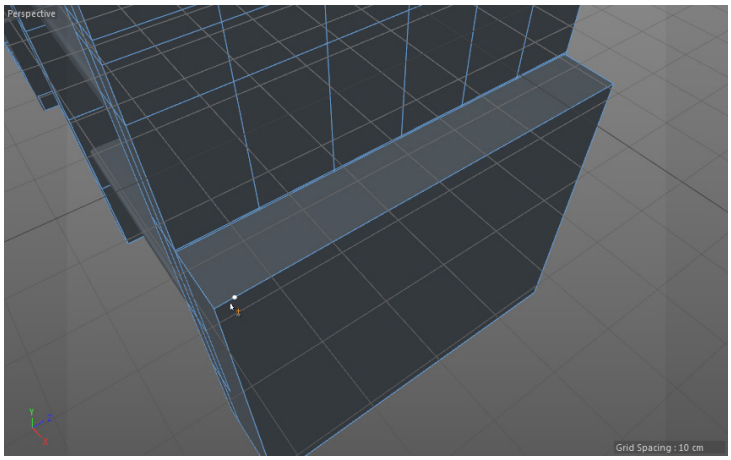

Figure 3-112 *Clicking on an edge*

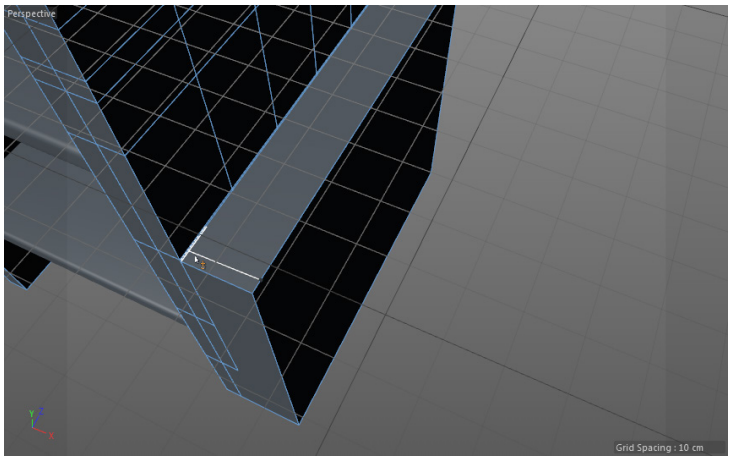

Figure 3-113 *Clicking on second edge to create a new edge*

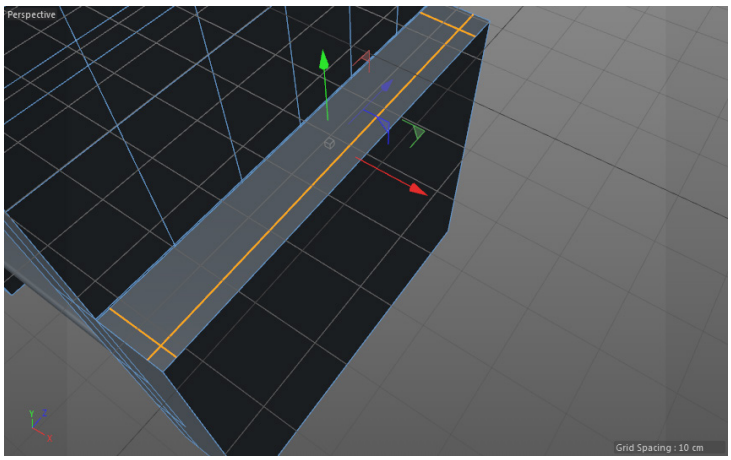

Figure 3-114 *Three new edges added to the magazine stand*

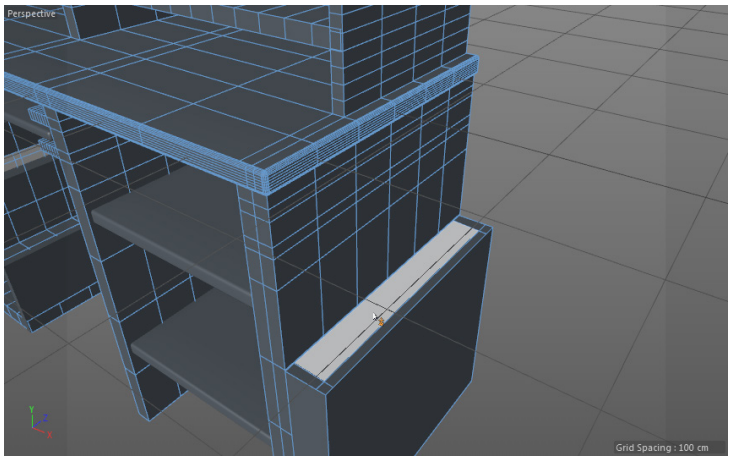

Figure 3-115 *Highlighted polygon*

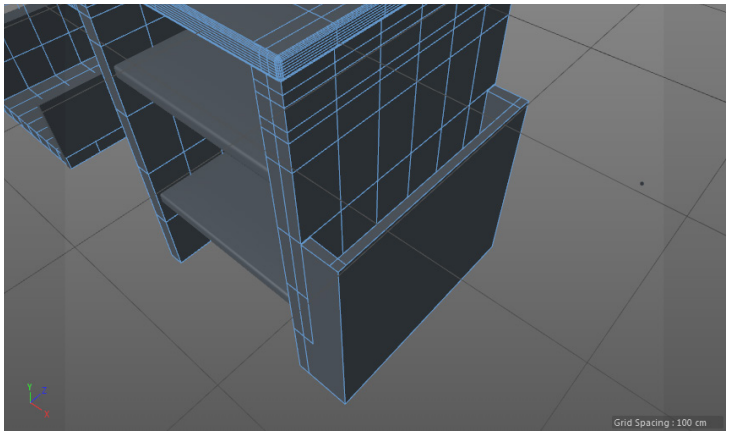

Figure 3-116 *Dragging the highlighted polygon downward*

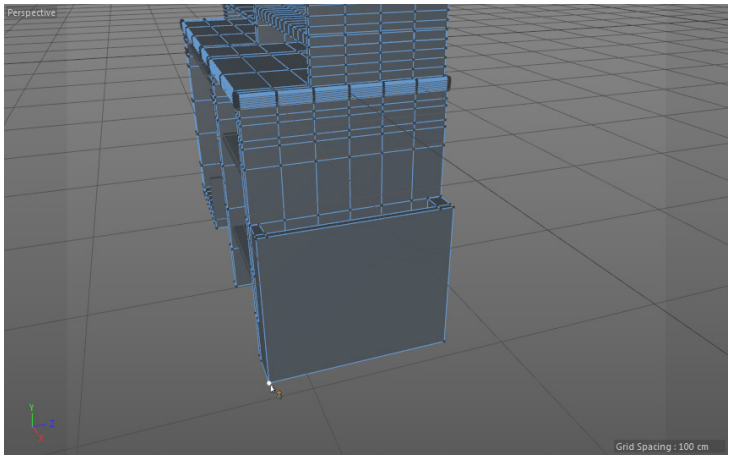

Figure 3-117 *Clicking on the corner point*

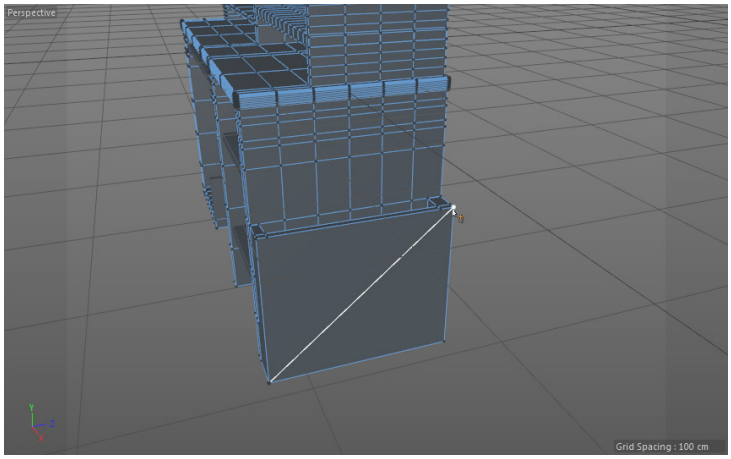

Figure 3-118 *The new edges created*

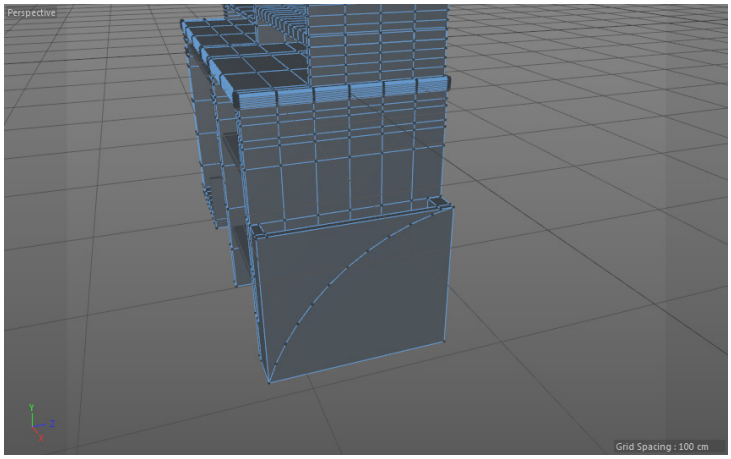

Figure 3-119 An arc shape edges created

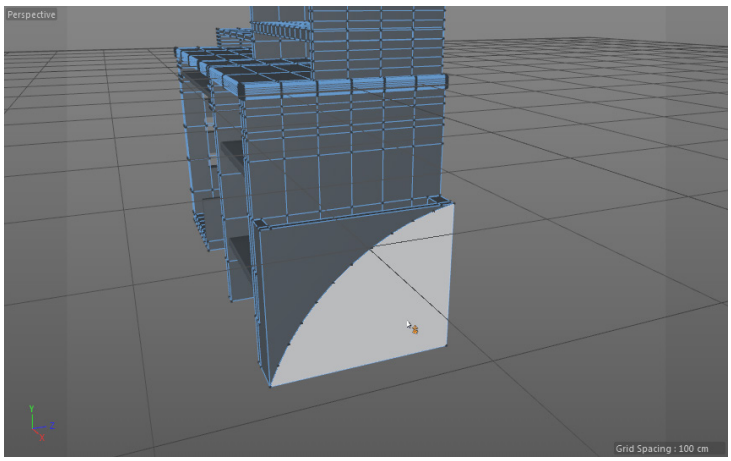

Figure 3-120 *Highlighted polygon*

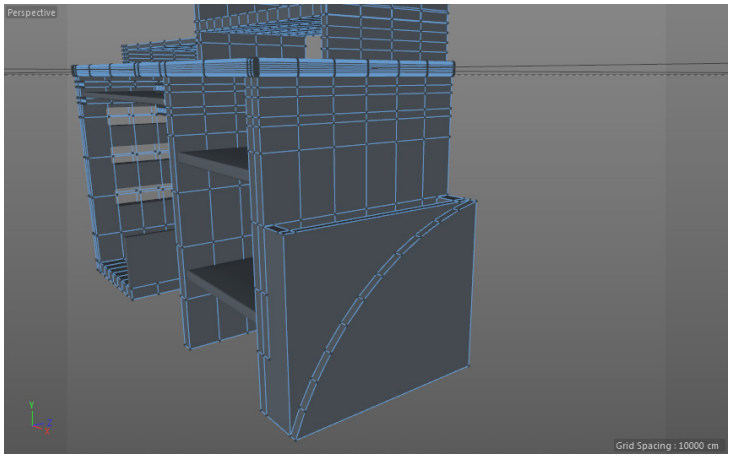

Figure 3-121 *The extruded polygon*

Figure 3-122 *The model of a chair*