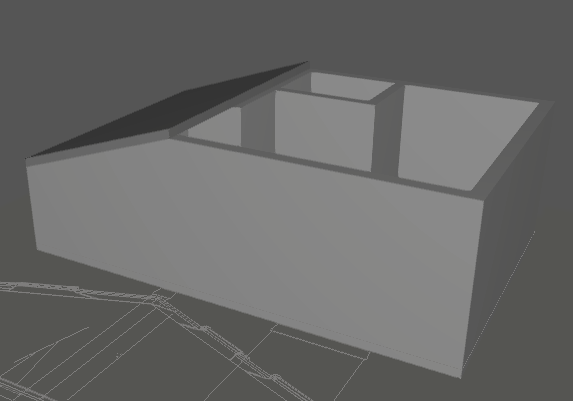
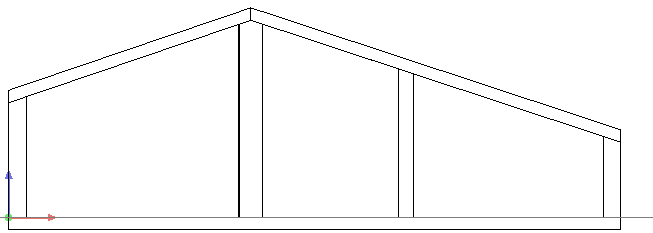
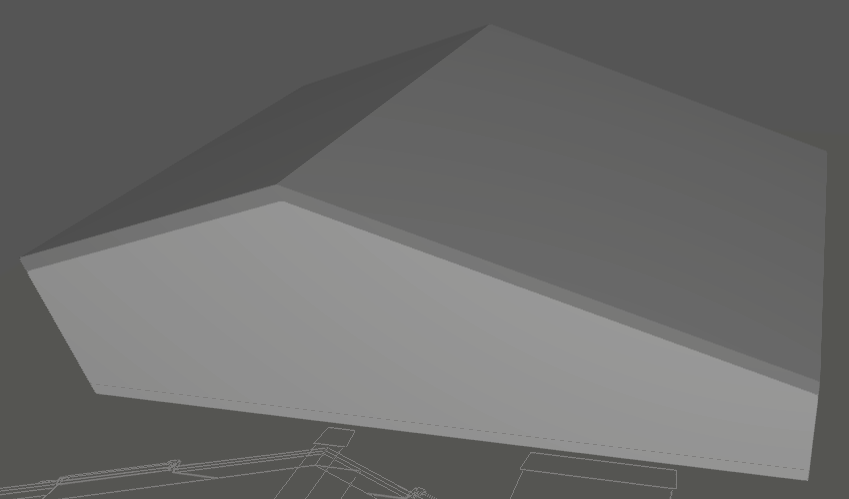
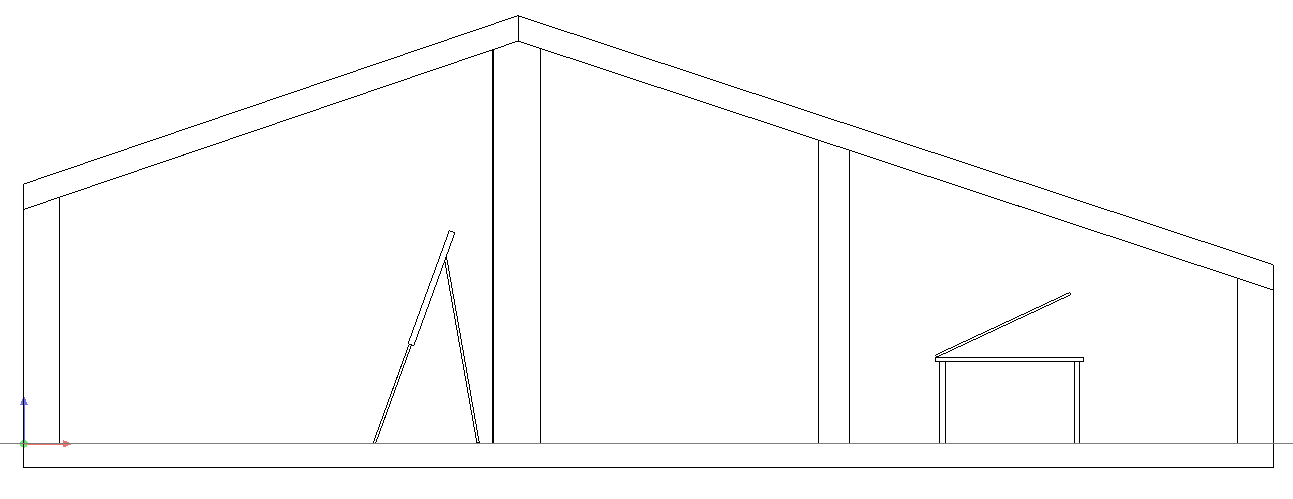
Mansarda

* add plan (meters)
* draw building
* create rooms (ignore stairs), height: 3,35 m (read value from DWG) – maximum height
* add door
* add sloped roof (single pitched roof) for the left side:
  + insert roof
  + rotate to -90°
  + scale to fit in the left side (outer walls, and in the middle of chimney) (6.485x4.110 m)
  + side view: change to height 335-195=140 cm, change Z origin to 1.95 cm



* add sloped roof (single pitched roof) for the right side:
  + insert roof
  + rotate to 90°
  + scale to fit in the right side (outer walls, and in the middle of chimney) (6.485x6.280 m)
  + side view: change to height 335-128=207 cm, change Z origin to 1.28 cm

* Add flip chart for woman
* Add a simple desk and another cube (reshape to a panel) (inclined for 25 deg)
* 
* Add roof windows:
  + Click on **building** to insert windows at right angle



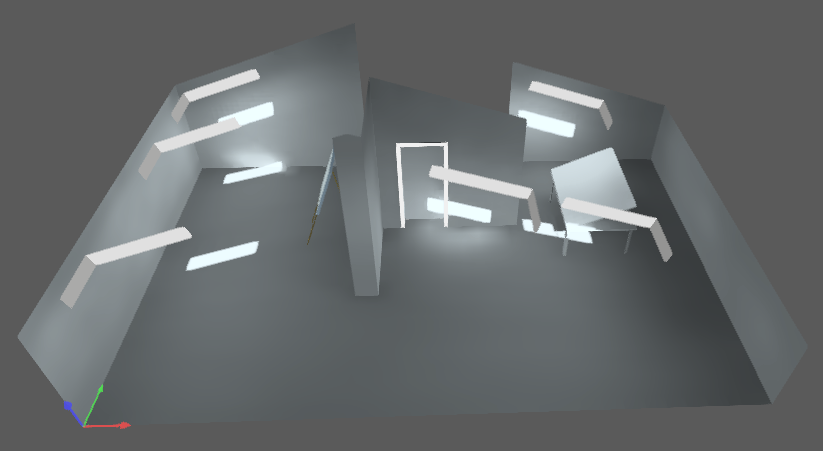
* + Insert **windows**, resize.
  + Copy windows for the left side, insert new window for the right side (if you copy left window to the right side, the inclination will not be OK.

**Daylight calculation:**

Set the location: Ljubljana

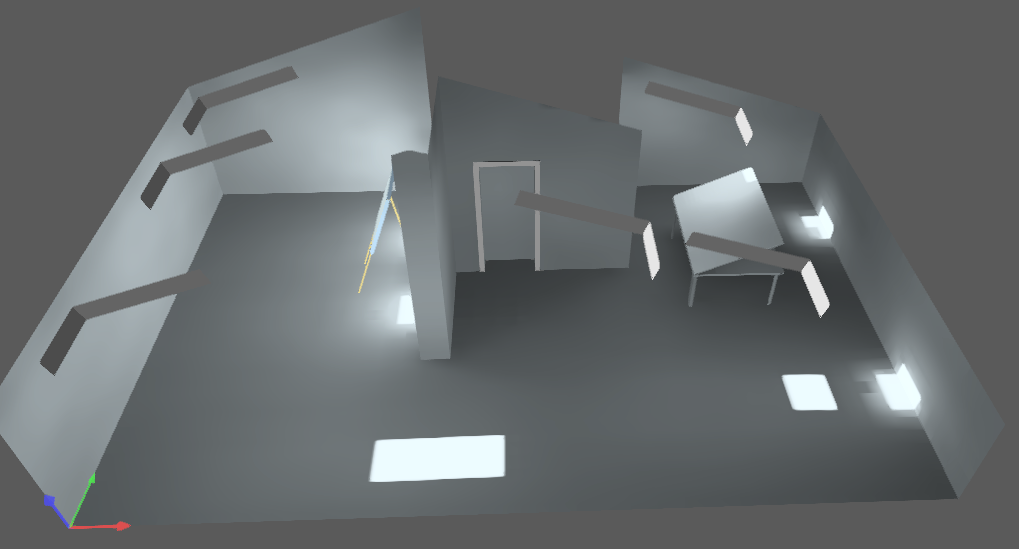
Set daylight conditions:

* + Clear sky, 21.3. at 12:00, use direct sun. run simulation



Since the sun is at the South, bright parts are on the “upper” side of the room!

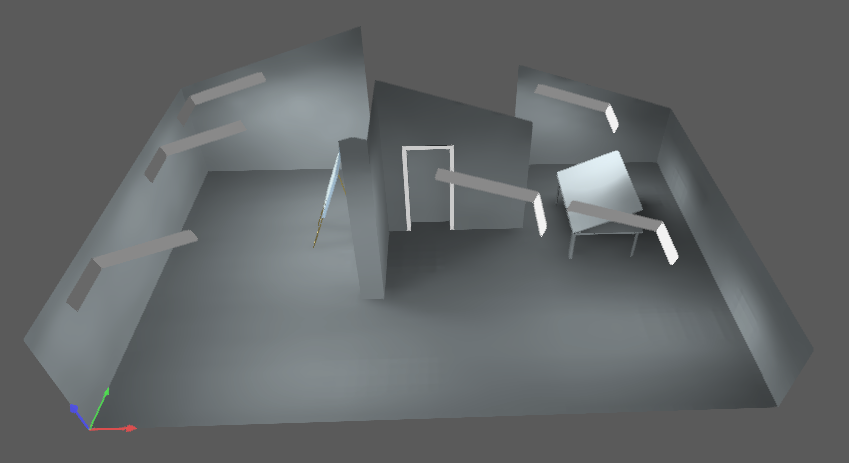
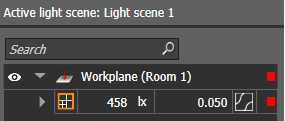
Change orientation of the object to 90° and run calculations



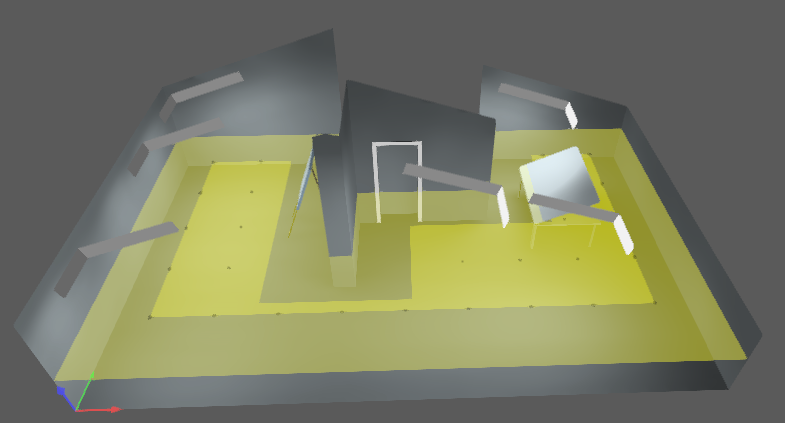
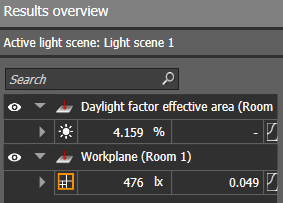
Bright parts are on the “right” side of the room!

Check the values of illuminance (move the mouse over the floor), up to 40.000 lx on the bright part and around 600-1000 lx on the dark part. Uniformity is so low, so we can not use the DIRECT sunlight – we have to use blinds!

Change daylight properties (exclude direct sunlight). Run simulation and compare results.

Change daylight properties (overcast sky). Run simulation and compare results, explain daylight factor.

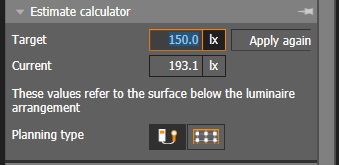
Change daylight properties (average sky with and without direct sunligh). Run simulation and compare results, explain daylight factor.

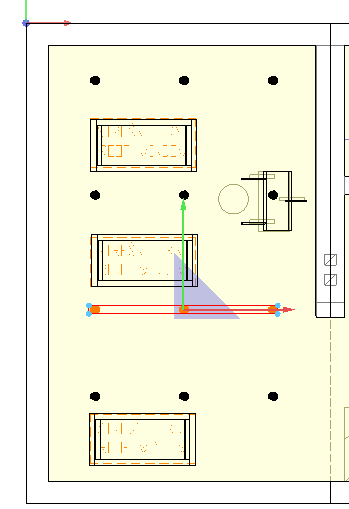
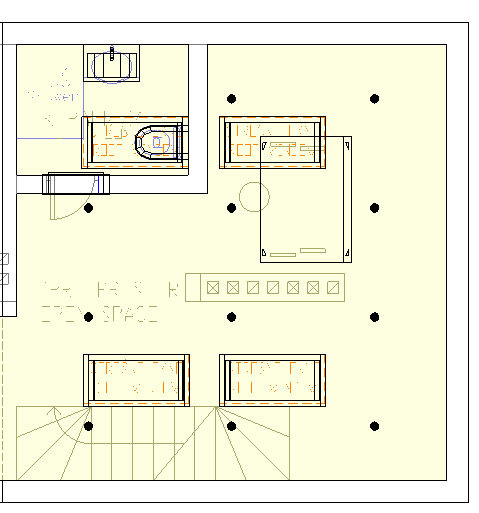
**Luminaries:**

**Homework**

Add luminaries to get about 150 lx in the whole room and add additional luminaries to get **500 lx and 0,7** uniformity on both working surfaces.

Be careful not to install luminaries on the windows. Use rectangular arrangement and use Estimate calculator to get proper number of luminaries. Separate left and right side



Explain how to move selection of luminaries in a group

* Create light scenes:
  + Just daylight
  + Ambient light (150 lx)
  + Working scene (ambient light +working lights)