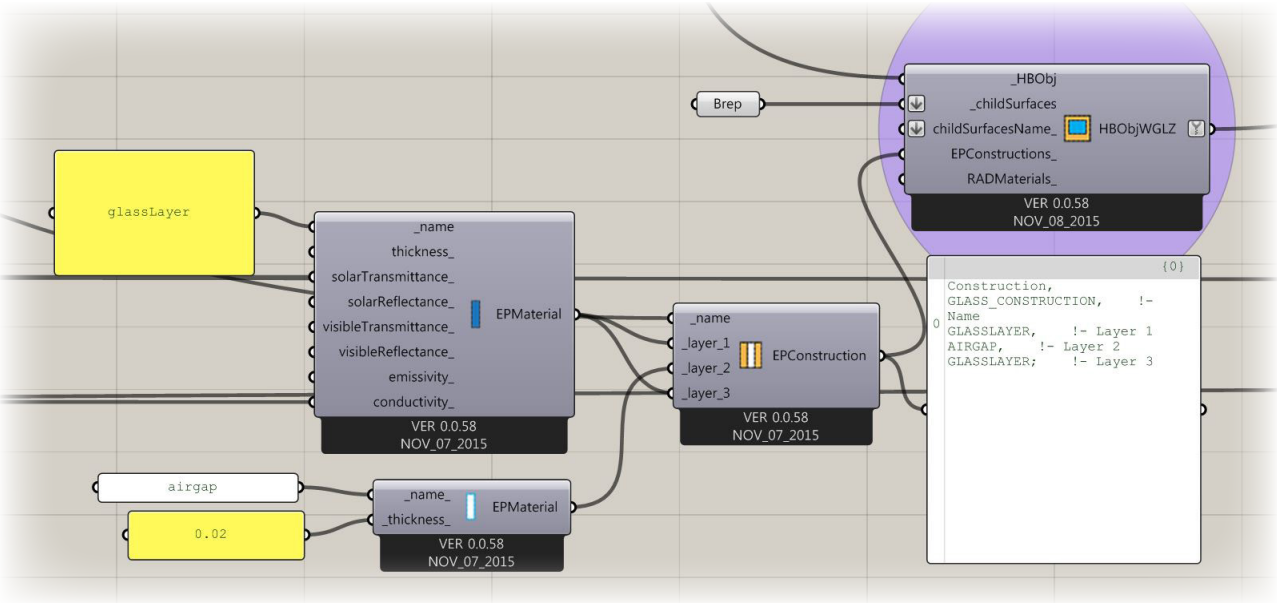
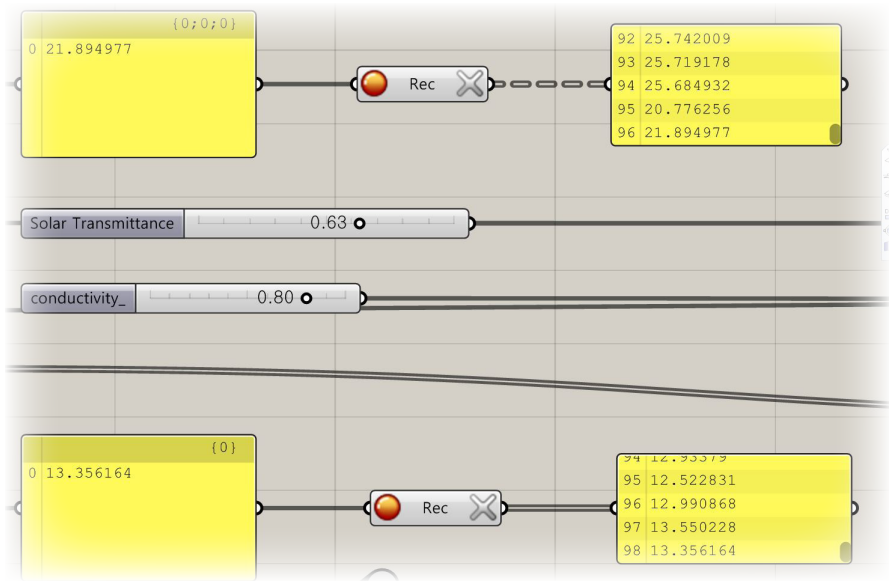
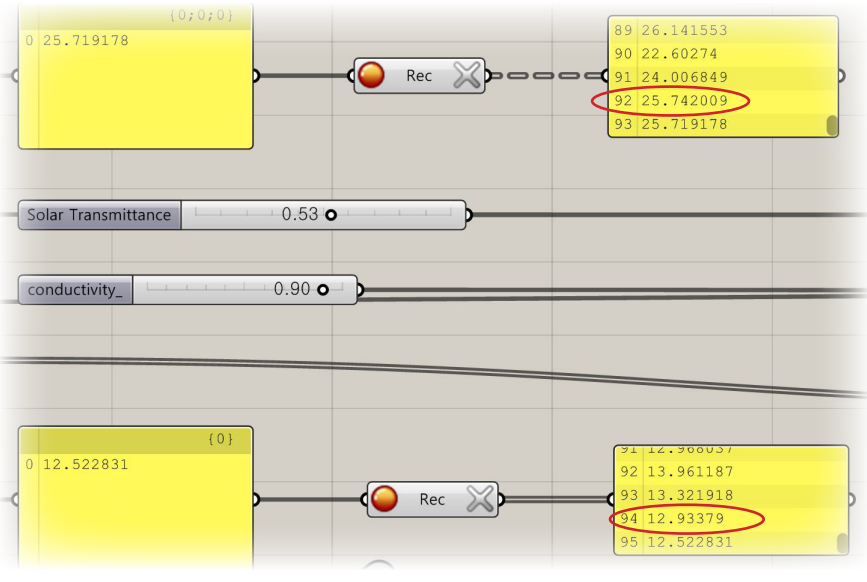
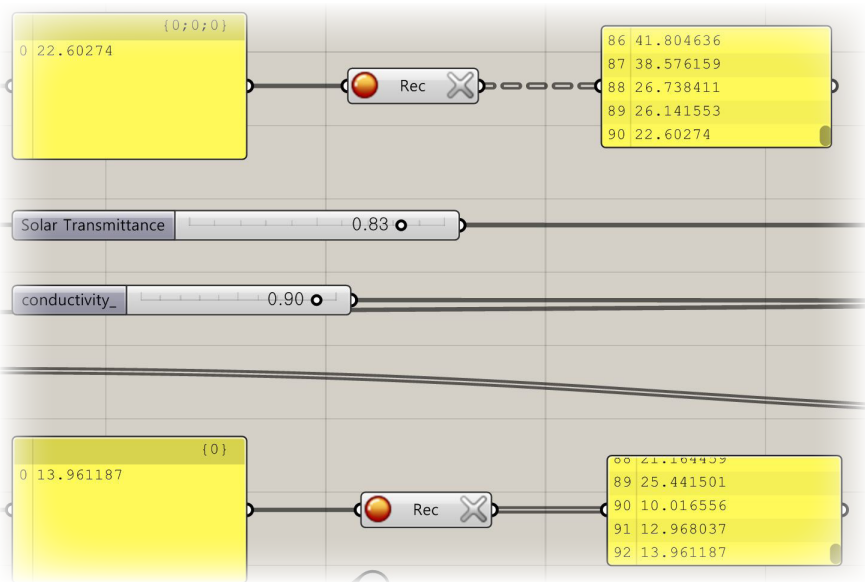


Material Variation

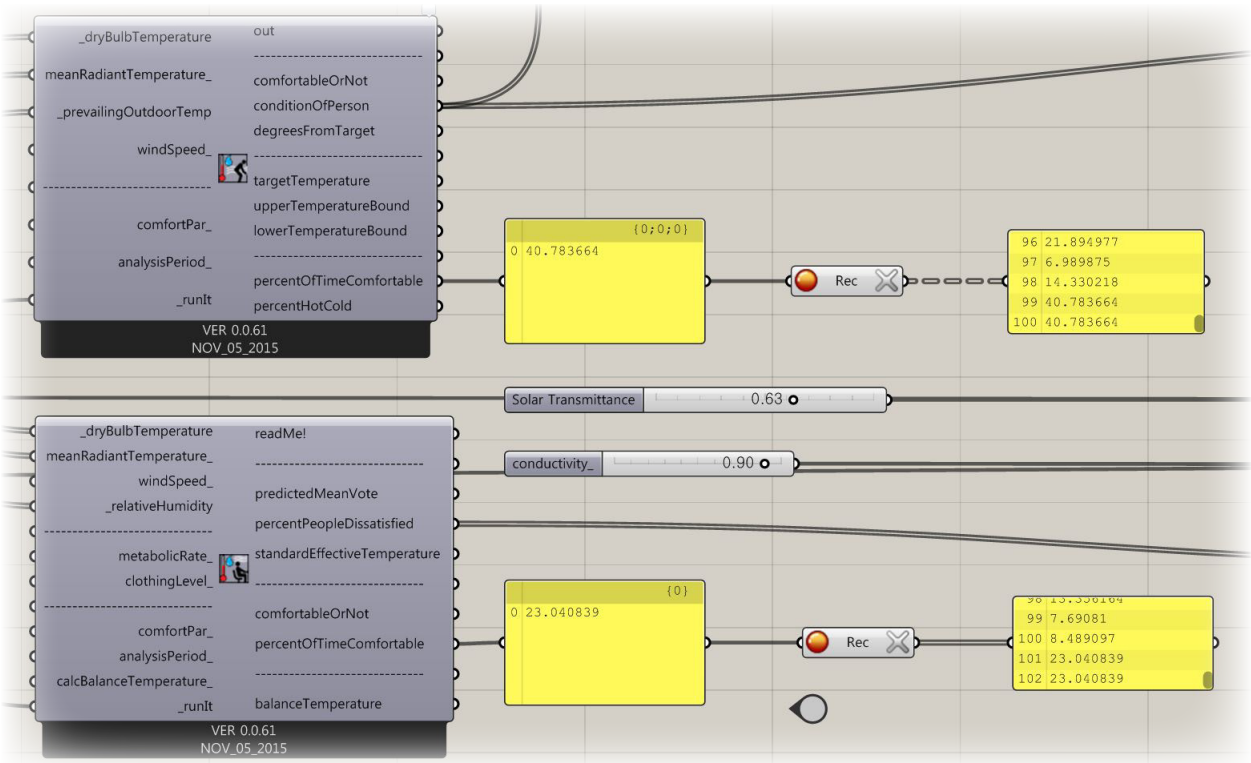


From previous design, I tried to apply better materail for indoor comfort.
By using above script, this research tried to achieve to best comfort condition.

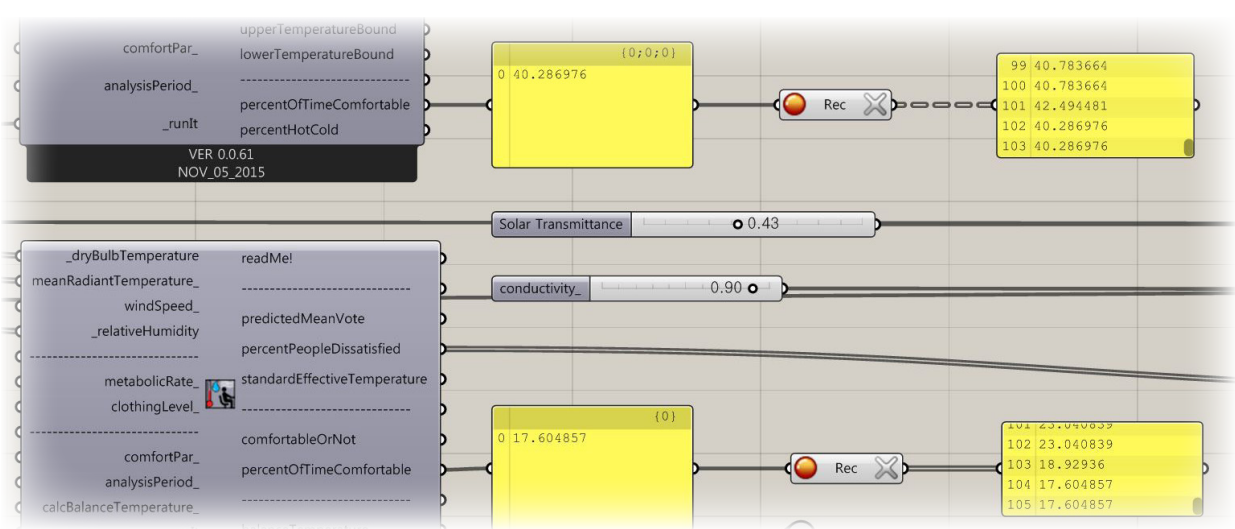
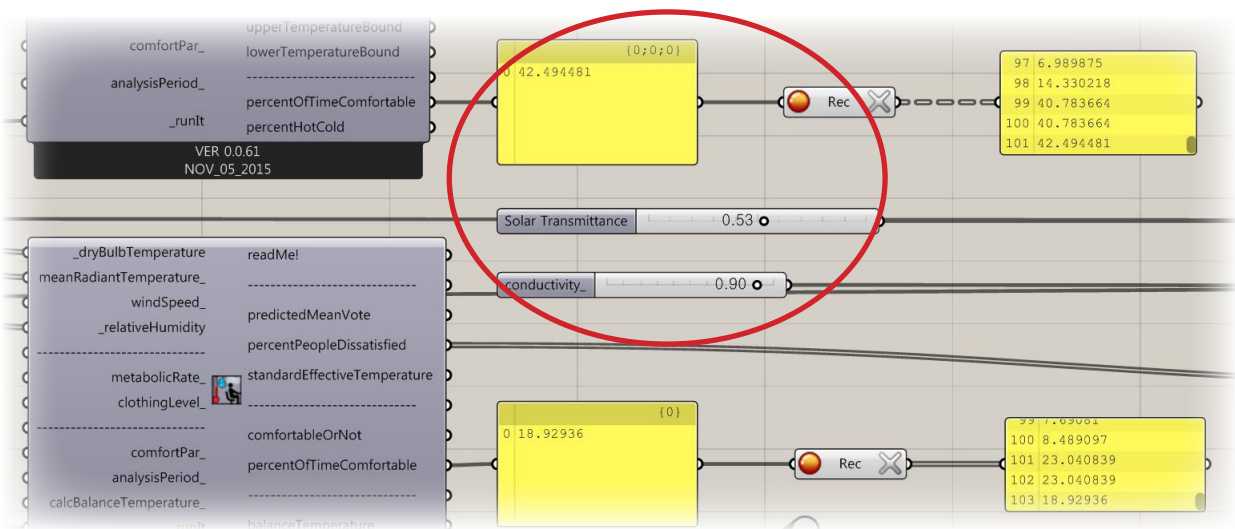


During whole year, I tried to find out best solar transmittance and conductivity rate for the zone.
Through out from 90th to 98th simulation, 0.63 of solar transmittance and 0.9 of conductivity could create best comfort zone.
(The solar transmittance and conductivity were chosen from definition of SHGC, and U value.)

Application for different seasons_winter season (Nov~Mar)

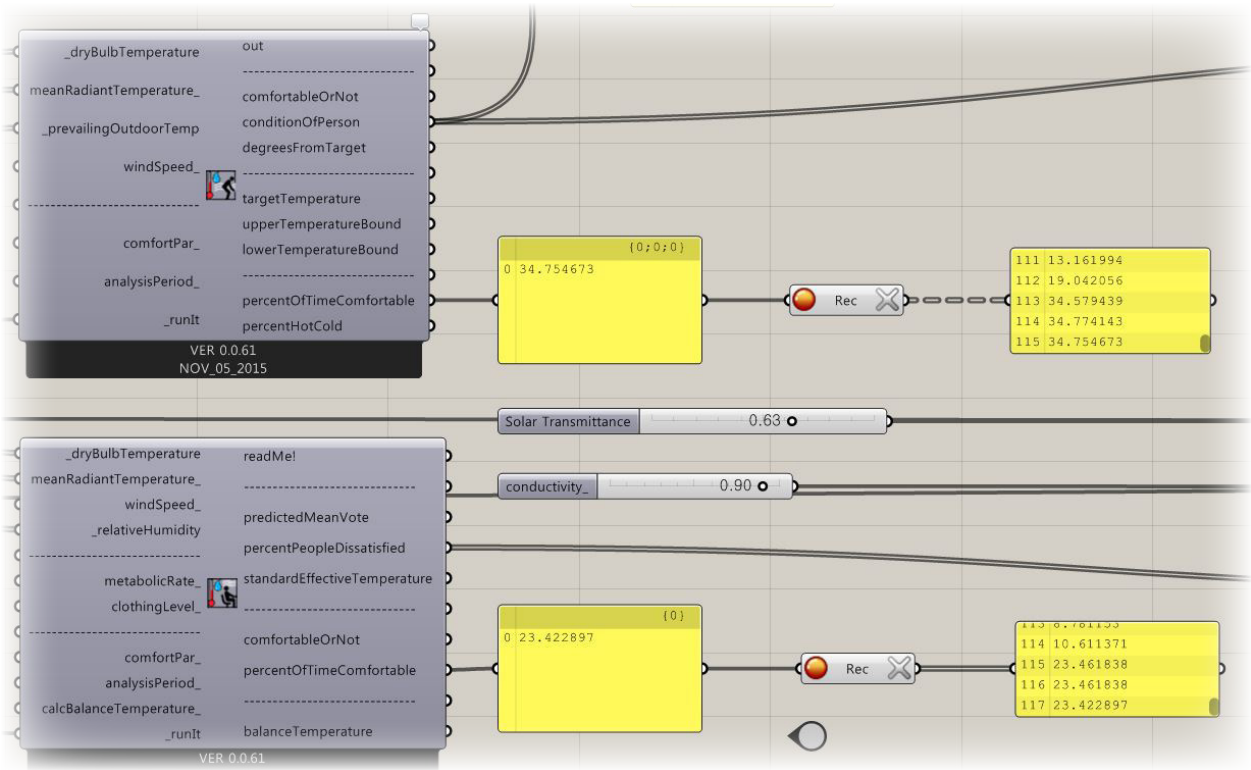


By applying best model from previous assignment to winter season, the comfort percentage was increased to 40.78. But this number is almost same number from previous assignment. I also applies different solar trnsmittance.

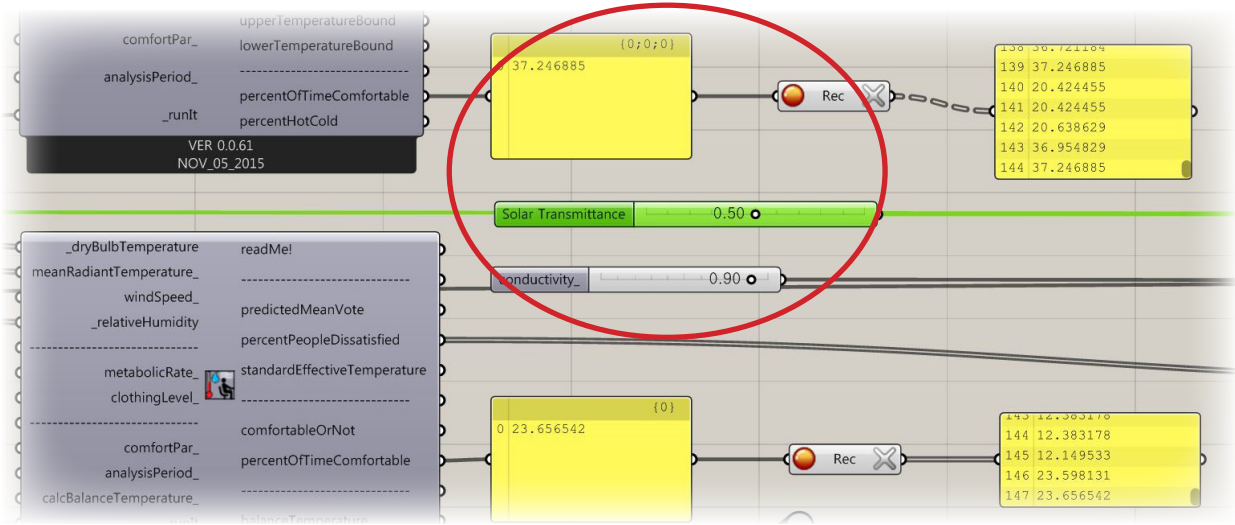


By considering cold season, only solar transmittance was changed to decrease for best comfort. Throughout this, I could reach to 42.28% comfort for winter season.

Application for different seasons_non-winter season (Nov~Mar)



By applying similar model from previous assignment to non-winter season with the double glazing window glasses, the comfort percentage was increased to 34.75%.
But this number is also same number from previous assignment.
I also applies different solar trnsmittance again.



By adjusting the solar transmittance tp 0.5, Throughout this, I could reach to 37.24% comfort for non-winter season.