

Dear All,

below there are 8 themes of essays

The allocation of topic to particular person is as follows: Your number on GroupList in USOS mod 8 gives the number of topic.

You should prepare an essay in the range 6 to 8 pages at the end of semester and send it to me by e-mail. Illustrations included must have indication of source. Other references should appeared at the end. It should be written in good english.

The essay must be supplied in pdf format to avoid possible problems with different editors. The filename must start with Your name as it appeared on USOS grouplist, with suffix indicated topic number. Ended with index album number.

Example: Surname5Kxxxx.pdf

The absolute !!! time limit is Tuesday 31st of January 2023. I need some time to mark Your papers and put them into protocol according to semester schedule.

Topic 0 : 2D geometric transformations, homogeneous coordinates, windowing transformation, line clipping, polygon clipping

Topic 1: Filling algorithms

Topic 2: 3D geometric transformations, observer placement and orientation, aeroplane model, carousel model

Topic 3: Planar geometric projections, classification, matrices, results

Topic 4: Polygon rendering methods, Phong illumination equations

Topic 5: Ray tracing, primary, secondary rays, z-buffer, effects: transparency, refraction, attenuation by translucent media/fog effect, shadows, acceleration of calculation.

Topic 6: Colour in computer graphics, colour spaces RGB CIE, XYZ CIE, colour models HSV, HLS, CMYK

Topic 7: Object representation, 2D and 3D