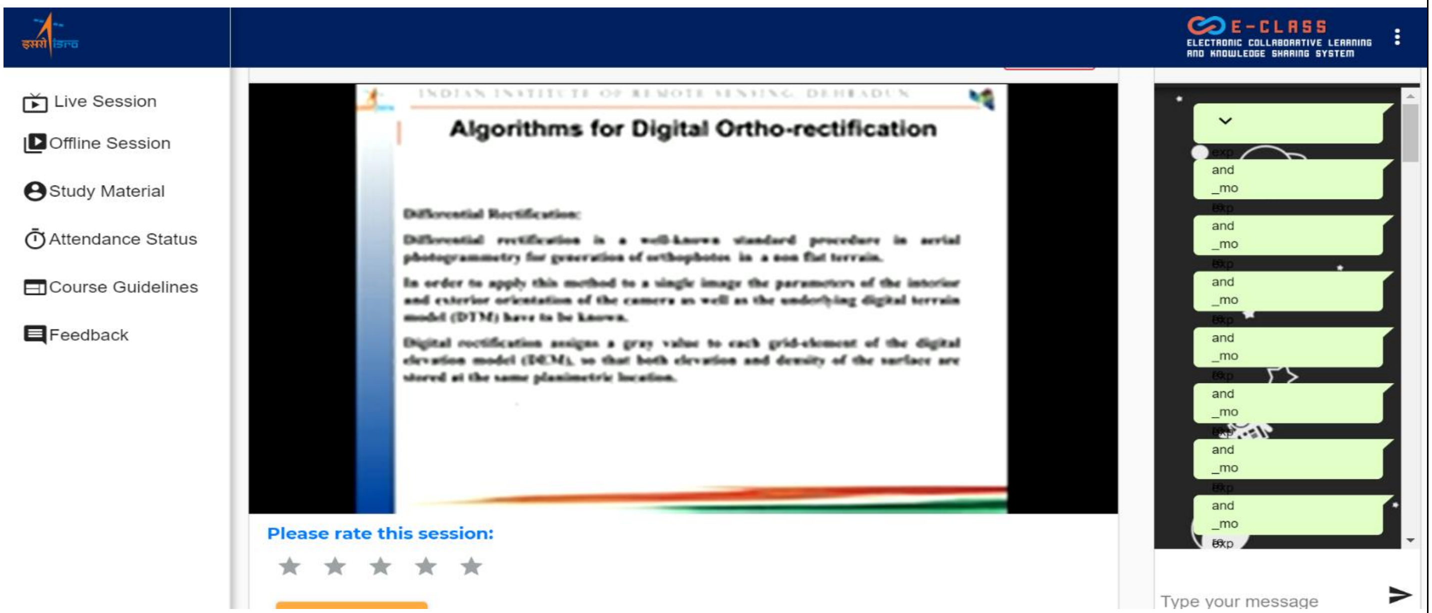
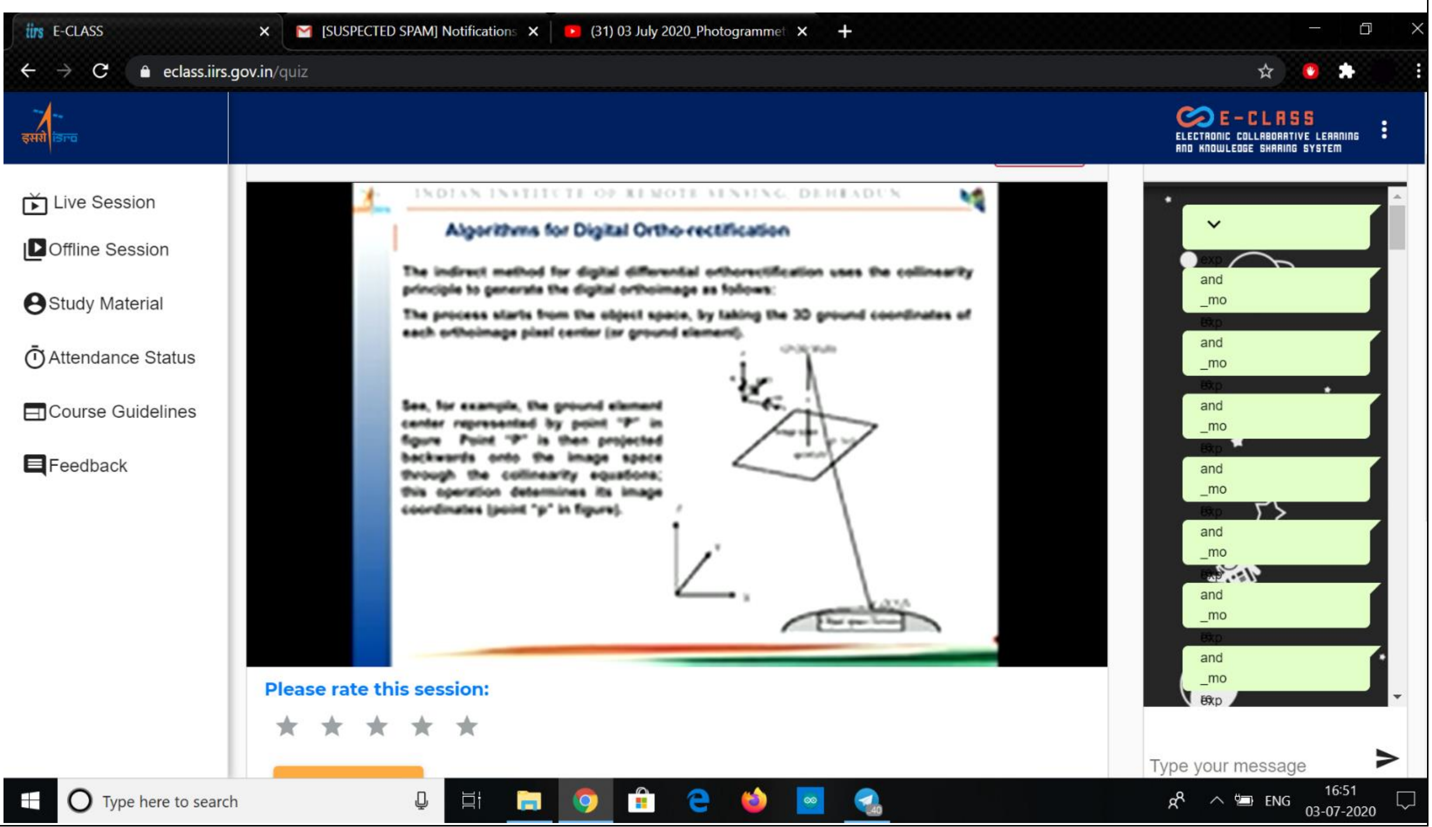
DAILY ASSESSMENT FORMAT

Date:	**3rd July 2020**	**Name:**	**Sushmitha R Naik**
Course:	**Satellite Photometery And Its Courses**	**USN:**	**4AL17EC090**
Topic:	**Programmetric products from satellite stereo images**	**Semester & Section:**	**6th sem & B sec**
Github Repository:	**Sushmitha_naik**		

FORENOON SESSION DETAILS

Image of session





Report:

Thereareseveralbasicmanipulationsthatcanbedonewith ArcMap.Thisinvolvestools under Spatial Analyst> Surface (the Spatial Analyst extension needs to be turned on in order for this to work properly).

Slope:TheDEMcaneasilybetransformedintoaslopemapwiththeSlopetool.This map describes the slope for each raster cell in degrees based on the elevation at each point.

- **Aspect: Another derivative is the aspect map .This map displays the aspect of each raster cell grouped into compass directions (north, northwest, etc.).**
- **Hillshade:Thistoolcreatesamapwithashade-effect(fig.2.3)basedontheinput parameters thatareenteredinthetool.Theresultingmapiseasiertointerpretthanthe originalDEM, becausesometopographicfeaturesarebettervisible(onsmallscale especially).**
- **Curvature: The curvature map (fig. 2.4) is calculated by using the curvature tool. This basically calculatestherelativechangeinslope,couldbeseenasasecondorderDEM derivative.**
- **Contour: Topographic contour lines can be plotted with the contour tool (fig. 2.6). Based on the user defined parameters the new map will display (elevation based) contour lines.**
- **Viewshed & Observer Points: These tools are used to calculate a (set of) positions relative to a user defined (point) feature (fig. 2.7). This is useful to determine the visibility of a location.**
- **AnotherusefulwaytodisplayaDEMistousethe“Selectattribute”feature(fig.2.8).By inserting a query and selecting a threshold, it is possible to select certain elevations on the map and display the location of these points.**
- **Ifyouwanttogoastepfurther,maybeinordertoclassifytheDEMbasedonelevation, youcould usethereclassifytool.Withthereclassifiedmapitispossibletodoa raster calculation in order to calculate a function for each raster cell (with each variable having its own map with values).Other possibilities with a DEM include interpolations. With certain tools it is possible to calculate unknown values based on known values that surround these unknown values. There are several ways to interpolate. It is also possible to converttherasterDEMtoavectormap,anduse vectorrelatedmanipulations.Thiswill however decrease the quality of the elevation data.The 3D Analyst tool can also be used to makeatopographicprofileofasectionlineintheDEM.Thislinecan bedrawnwiththe3D analysttool,andtheprofilecanbemadeorcustomizedwiththistoolas well (fig. 3).**

In-Depth Analysis:

DEMsaregoodforlandscapeanalysis.Therearemanymoreadvancedandspecialized functions and applications in ArcMap that can be used for analysis. This includes, but is not limited to, hydrologic analysis, geologic and geomorphic analysis and landscape development.

Itisalsopossibletodocalculationswithrasterdata.TheDEMelevationvaluescanbeused for this, but another option is to reclassify the map and give each class a certain value that is used in a function. This can easily be displayed in a model, which can also be made in ArcMap.