**DAILY ASSESSMENT FORMAT**

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| **Date:** | **03/07/2020** | **Name:** | **Lepakshi T V** |
| **Course:** | **IIRS** | **USN:** | **4AL17EC044** |
| **Topic:** | **Programmetric products from satellite stereo images** | **Semester & Section:** | **6th sem A sec** |
| **Github Repository:** | **Lepakshi-044** |  |  |

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| **FORENOON SESSION DETAILS** |
| **Image of session** |
| **Report – Report can be typed or hand written for up to two pages.**   * Digital Elevation Models (DEMs) are raster files with elevation data for each raster cell. DEMs are popular for calculations, manipulations and further analysis of an area, and more specifically analysis based on the elevation. * ArcGIS has several built-in functions that are very easy to use and will turn the DEM into a derivative map. There are several basic manipulations that can be done with ArcMap. * This involves tools under Spatial Analyst > Surface (the Spatial Analyst extension needs to be turned on in order for this to work properly). DEMs are good for landscape analysis. * There are many more advanced and specialized 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. * It is also possible to do calculations with raster data. The DEM elevation values can be used 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. A good example is the Revised Universal Soil Loss Equation (RUSLE). * This equation can be calculated by using several maps and manipulating/reclassifying those maps and subsequently use the raster calculator tool. * The function is as follows: A= R\*K\*LS\*C\*P with A as average annual soil loss, R the rainfall-runoff erosivity factor, K the soil erodibility factor, LS the slope length and steepness factor, C the cover management factor and P the support practice factor. More information about the RUSLE can be found online. * The DEM is a very useful feature in the geospatial analysis. It is used for many research fields and can be manipulated in many ways. * The possibilities described in this GIS in Practice are just a summary of all possibilities of a single DEM. |