**DAILY ASSESSMENT FORMAT**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date:** | **1 July 2020** | **Name:** | **Kavya M M** |
| **Course:** | **IIRS** | **USN:** | **4AL17EC040** |
| **Topic:** | **Software requirements of a digital photogrammetric workflow** | **Semester & Section:** | **6TH SEM & ‘A’ SEC** |
| **Github Repository:** | **Kavya\_ECE040** |  |  |

|  |
| --- |
| **FORENOON SESSION DETAILS** |
| **Software requirements of a digital photogrammetric workflow:**  Standard requirements:   * Handling image display * Measurements   -recording pixel coordinates   * Determination of orientations   -inner orientation including calibration parameters  -relative and absolute orientations, bundle adjustment   * Transformations * Image processing functions * Digital rectification * Visualization   Science, technology and art of making precise measurements on images produced by spaceborne imaging sensors to derive reliable topographic information of the viewed planetary surface  **Advantages of imaging from space:**   * Synoptic view * Large swath, repeativity * Constant scale, near orthonormal projection * Negligible internal distortions * Stable radiometry * Formalities associated with aerial photography and flight arrangement are avoided here   **Stereo imaging and topographic mapping:**  Stereo satellite images are captured-   * Consecutively by a single satellite along the same orbit within a few second (along track imaging technique) * By the same satellite (or different satellite) from different orbit in different dates (across the track imaging technique) * The base to height (B/H) ratio should be close to 1 for high-quality stereo model with high elevation accuracy * Optimum base to height ratio is 0.6 to 1.0   **Data processing:**   * 3 empirical laws of planetary motion  1. Every planet revolves around primary body in elliptical orbit with sun at one focus 2. The radius vector sweeps out equal areas in equal interval of time 3. The period of the orbit squared proportional to the semi-major axis cubed  * Constitute a complete solution to the two-body problem * Equation of motion for satellites are differential equations * Solution by numerical integration over time |