

Quadrant II– Transcript and related material

Programme : S.Y.B.A./S.Y.B.Sc.

Subject : Geography

Paper Code : GES 108

Paper Title : Application of GIS in Geography

Unit: I : Coordinate System

Module Name : Digitizing

Module No : 15

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➤ **Digitizing:**

Digitizing in GIS is the process of converting geographic data either from a hardcopy or a scanned image into vector data by tracing the features. During the digitizing process, features from the traced map or image are captured as coordinates in either point, line, or polygon format. In Short, Digitization is the process of converting data into computer understanding language or in digital form or in vector layer. Vector layer will be used for data attachment and analysis for geo-spatial planning and decision making.

➤ **Nature of Digitization Process:**

There is a great deal of geographic data available in formats that can not be immediately integrated with other GIS data. In order to use these types of data in GIS it is necessary to align it with existing geographically referenced data, this process is also called georeferencing. Georeferencing is also a necessary step in

the digitizing process. Digitizing in GIS is the process of “tracing”, in a geographically correct way, information from images/maps.

➤ **Significance of Digitizing:**

Digitizing is the process of making features we can see on the map editable and making them features to which additional spatial and non-spatial attributes can be assigned. This means we are going to follow a process of making digital versions of objects that will have an attribute table associated with them. Our primary goal will be digitizing the features in point, line and polygon, which are objects that occupy an area on the map, once they are digitized and have an associated attribute table these objects will also be known as polygon features.

By digitizing these features, you make them available for mapping once you have added the tabular data to the attribute table. The digitizing process is started by creating new layers in QGIS 3.16.3

❖ **Stages of Digitizing in QGIS 3.16.3:**

1. **Open QGIS 3.16 software**
2. **Open Georeferenced map/Toposheet/ Image in QGIS**
3. **Create vector layers (Point, Line & Polygon) and add attribute fields**
4. **Start editing and digitize the map by making vector layer**
5. **Enter the attribute data and save editing.**

❖ **Link to the get hands-on practice video of Digitizing:**

1. <https://www.youtube.com/watch?v=ZgsXKw2ZjIA&t=2s>
2. <https://www.youtube.com/watch?v=Zer558SnKX4&t=3s>
3. <https://www.youtube.com/watch?v=MnVDeiwulgM&t=5s>
4. <https://www.youtube.com/watch?v=j-9uSQh6w9U&t=2s>
5. <https://www.youtube.com/watch?v=SFH3rPWSO4E&t=6s>

❖ **Manual Links for Digitizing in QGIS :**

1. https://docs.qgis.org/2.14/en/docs/training_manual/
2. https://docs.qgis.org/3.16/en/docs/training_manual/index.html
3. <https://freegistutorial.com/qgis-tutorial-beginners/>
4. <http://www.refugeeinfoturkey.org/repo/Toolkit/CapacityBuilding/GIS/02+-+Step+by+Step+QGIS.pdf>
5. <https://www.igismap.com/introduction-of-qgis-3-2-1-for-beginners/>