GIS software	Data hieararchy in comparison with GRASS GIS	Has startup screen? Is always displayed? How does it look like?	Association file	Features for enhancing first-time user experience	Does it allow the incorrect display of two layers of different coordinate systems on top of each other?
ArcGIS Pro 2.4	**Project** - similar to GRASS workspace, each project has its own database in which we store data **Map** - associated with Map Window, possible to have several Maps (Map Windows) **Map** - has one CRS similarly as GRASS location but can contain **layers** with different CRS which are On the fly transformed to the Map's CRS	**Yes**, startup screen always displayed Open options: Open recent projects, open another project Create options: Blank Templates (Map, Catalog, Global Scene, Local Scene, Start withnout template (can be saved later)	**Yes**, we can start through association file associated with project file (.aprx)	**Startup screen -** very straightforward and provides four different types of templates **Main software window** - no features that should specifically help the first-time user	**No**, it does not. Layers in the map are displayed correctly using "on the fly" transformation.
GeoMedia Advantage 2020	**GeoWorkspace** - as GRASS workspace **Warehouse** (.mdb) - has the character of a database. You need to define it first, then connect to it. It has a clearly defined coordinate system, ie a similar role as GRASS location. One GeoWorkspace file can have multiple Warehouses attached.	**Yes**, always displayed. It has a form of small dialog box for selecting GeoWorspace file Open options: Open an existing GeoWorkspace file Create options: Create a new GeoWorkspace file using Blank file or Template,	**Yes**, we can start through association file associated with GeoWorkspace file (.gws)	**Startup screen** - this is only a dialog box for selecting a GeoWorkspace file The software provides two GeoWorkspace templates **Main software window** - It does not provide any elements that would help a newcomer to start. Connection of warehouses is very unintuitive and just displaying an ordinary shapefile costs a lot of effort.	**No**, it does not. Within the map window we can have more different GeoWorkspace files with diverse CRS and the software supports "on the fly" transformation. The coordinate systems that are defined for the the map window are named Locations.
MapInfo 2019	**Workspace** - as GRASS workspace **Map** - associated with Map Window, possible to have several Maps (Map Windows) **Map** - has one CRS similarly as GRASS location and contained layers have the same CRS	**Yes**, startup screen always displayed, occupies the entire computer screen Open options: Open blank workspace, recent workspaces, sample workspace, last saved session (not for first-time user)	**Yes**, we can start through association file associated with workspace file (.wor)	**Startup screen** - very straightforward, provides Getting Started info, MapInfo News, hyperlink to connect with User Groups **Furthermore, it** provides one very comprehensive Washington DC Sample **Main software window** - no features that should specifically help the first-time user, all is included in startup screen	**No**, it does not. When importing data, a file with the company's own data format (.tab) is created and transformed. Thus, a data transformation occurs.The CRS is set to Map level, not layer level.