

Lankageoeye

digital atlas

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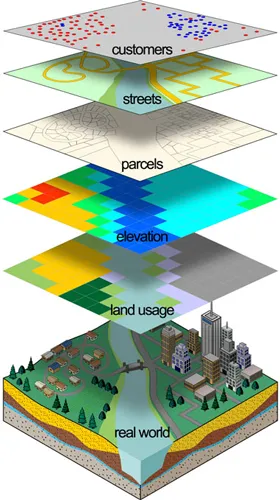
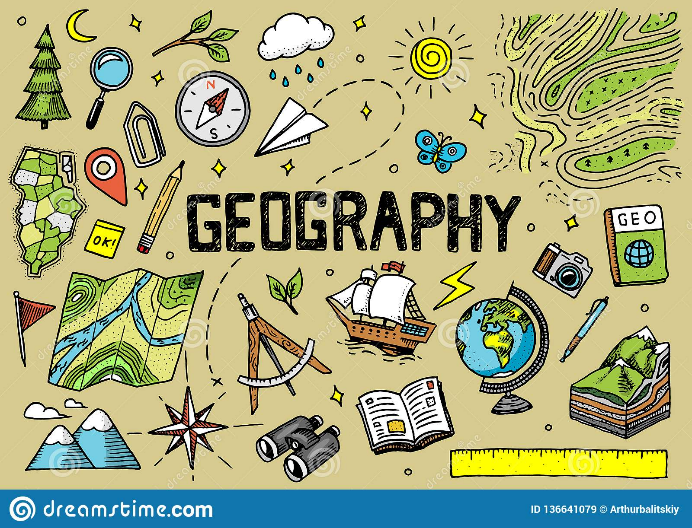
**LankaGeoEye**

**Introduction**

Opportunities for education in the 21st century, as well as the teaching and learning process, have taken a whole new dimension. Today, the existing media for education are constantly evolving and the use of technological tools and the introduction of new tools are constantly taking place. Today, digitization has become a major floating change. Accordingly, the learning and teaching process is changing rapidly to suit the modern world

The plague of Covid 19 has made it clear that online education, once restricted to developed countries, should now be extended to smaller countries as well. Accordingly, going to school today has gone beyond the land where we have accumulated. Today we can see the teacher only through the internet. Realizing this need, the main objective of this software application is to present the subject knowledge required for GCE O / L students and the mapping required by the teachers as a digital map exercises under the Geography Subject.

This online application, which I plan to develop for the subject of Geography, is initially covered as a starting point for Grade 08,09,10 only. In classrooms we use paper-based atlases which have limited use. But in Digital form we are in more dynamic platform to view, search Geographical features that are spatially distributes.



LankaGeoEye is digital Atlas which will visualize Topographic and Thematic feature of the earth. A digital atlas may be defined as a computerized geographic information system related to a certain area or the time in connection with a given purpose. Paper based atlases still play an important and limited role in a controlled environment. But the digital atlases visualized on different monitors with different zoom factors.

**Changing the way of mapping**

Mapping is the translation of spatial information in to graphical symbols. Technology is revolutionizing the way we make maps. As we move into the digital environment, computer cartography and GIS are transforming the way we think of and interact with geographic information. Today modern cartography often takes place within a GIS or Geographic Information System.

GIS is computer software that links geographic information (where things are) with descriptive information (what things are). We use GIS to visualize, question, analyze and understand data about the world and organize it on intelligent, interactive digital maps

**Importance**

Digital Atlas is very important to school students in all ages. It can be used in different prenominal such as physical and human geography at different scales. We can use digital maps zooming in and out. One of the important functions of electronic school atlas is the possibility to read a map is one of the basic in school geography program. Therefore, the first thing that the teacher should be able to do and student to learn is the ability to read geographic data on digital maps with the help of electronic school atlas. As is known, the geographical information is mapped in the conventional signs. We have more limitation in digital maps

* + it was designed for someone else
  + the scale is fixed
  + it can’t be updated
  + it can’t be reclassified or re-symbolized

**Why do we need this?**

The digital map is an electronic map, which operation is based on a combination of graphic elements assigned to it in the form of electronic information. Using digital maps, we can gain more advantages for students.  Advantages of digital maps compared with paper maps are visible at first glance:

* digital maps can include any area,
* they’re scalable - we can freely zoom them in and out,
* they’re more accurate (there are no printed maps on such a scale as the greatest closer of digital maps),
* they are more up-to-date (can be remotely updated at a much lower cost, and labour),
* they may contain a lot of different information, and layered architecture that allows you to group data and turning them on and off doesn’t disrupt their visibility,
* they are interactive (answer to the selected user actions - eg. Click),
* they take up a lot less space and we may be always with you.

**Gaps**

Reading a paper map is essentially limited to comparing and analyzing the location of objects deposited in the conventional signs displayed in the legend. The digital map carries more information about the objects represented in the conventional signs. This information is contained in the semantics of the objects mapped. For more information about the object it is enough to bring the cursor to it and click the right mouse button. This will open an additional window in which you can get acquainted with all the semantic properties of the selected object. Semantic characteristics can be both qualitative (the name, a brief description of the properties) and quantitative (numerical parameters, the number of inhabitants, etc.). The characteristics of maps and information relating to the whole map or layer are opened by the button on the toolbar.

**To whom we are presenting?**

Geography is concerned with people and places, and the complex relationships between them This web-based application help students explore and understand these relationships and how they impact society and culture. As students can use this tool to explore more of the Sri Lanka, they'll begin to think critically about the issues and problems affecting their communities and learn how to be good local and global citizens

This application offers a nice mix of practical factual learning about Political and Administrative Boundaries, Physical Characteristics, Human Geography, and more alongside more dynamic exploratory, creative, and critical thinking.

**Scope**

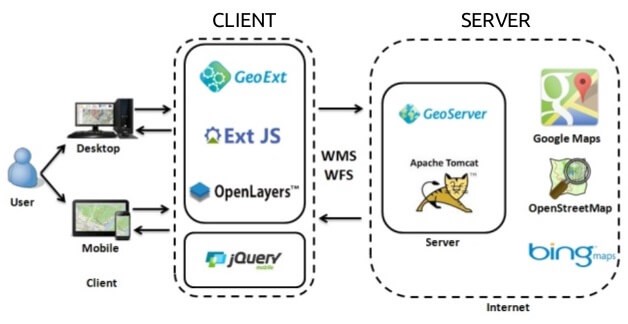
**Grade 09**

1. Spatial Relationship and Absolute Location of the Sri Lanka
2. Reviews the nature of the physical and human landscape of Sri Lanka
   1. Physical landscape of Sri Lanka - Relief - Drainage - Climate - Vegetation zones
   2. Human landscape of Sri Lanka - Basic components of human landscape in Sri Lanka
      1. Population (size, distribution, composition, growth),
      2. Settlements - Economic activities (Agricultural, Industrial, Services)
      3. Infrastructure (Road Electricity, Water)
3. Spatial Changes of Development in Sri Lanka
   1. Per capita income
   2. Life Expectancy
   3. Infant mortality rate
   4. Literacy

**Grade -10**

1. Introduction to maps
   1. Types of maps and their uses
   2. Thematic maps Topographic maps
2. Agriculture, livestock farming and fishing industry in Sri Lanka and review their importance in the economy
   1. Sri Lanka's agriculture and fishing: Distribution,
      1. Agricultural crops Rice cultivation Tea, coconut, rubber, minor export crops Vegetables and fruits Livestock farming Dairy farming
      2. Fishing industry - Freshwater, marine and brackish

**Methodology and System Architecture**

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**Tools**

* **QGIS**- Open-Source Mapping Software
* **HTML**
* **Leaflet**-Leaflet holds the leading position among open-source JavaScript libraries for interactive maps.
* **Geoserver**: from geospatial datasets to Web Services
* **OpenStreetMap** is a collaborative project to create a free editable map of the world.

**Facilities**

* LankaGeoEye freely-available online atlas targeted to students and teachers from every school in the country, searching for up-to-date country and regional maps, data, and visualizations for learning geography.
* Discover a new way to view maps through this interactive tool by clicking on the screen
* These political, physical, and demographic maps, images and visualizations will assist you with classroom work, remote learning, doing homework

**Expected Outcome**

**Project Plan**

|  |  |  |
| --- | --- | --- |
| SN | Activity | Time Line |
| 01 | Requirement Analysis |  |
| 02 | Preparation of Maps |  |
| 03 | System Designing |  |
| 04 | Interface Designing |  |
| 05 | Data Export |  |
| 06 | Coding |  |
| 07 | Testing |  |
| 08 | Fix issues and apply changes |  |
| 09 | Deployment |  |
| 10 | Publish for users |  |