TECHNOLOGICAL INSTITUTE OF THE PHILIPPINES
COLLEGE OF COMPUTER STUDIES
938 Aurora Boulevard, Cubao, Quezon City

ITE 405 – APPLIED PLOTTING, CHARTING, DATA REPRESENTATION
Summer SY: 2024-2025
Prelim Period
Laboratory Task

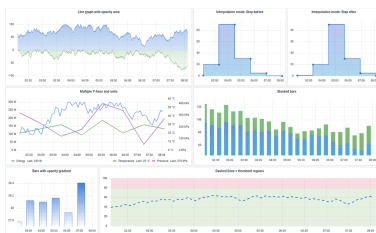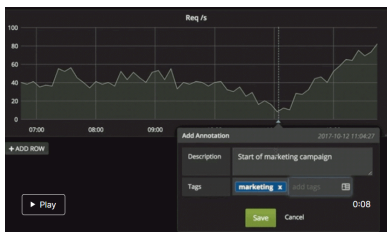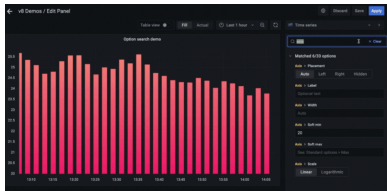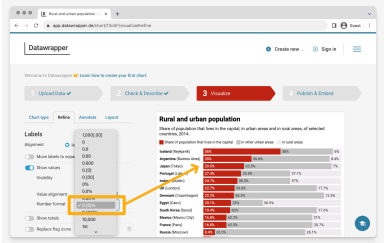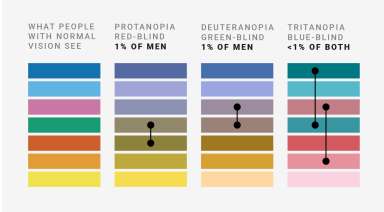| Names: Jaspher F. Cadeliña Clarence C. Cortina	Program: BSCS
Section: CS33S3	Instructor: Ms. Monaliza Gregorio
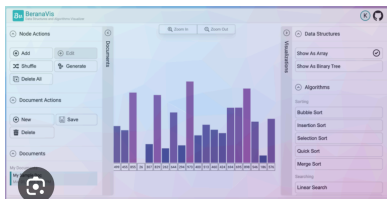
Objective:

Students will be able to identify various online applications for data visualization, select and explore three open-source tools, analyze their features, and document their functionalities. Additionally, students will research mobile applications for data visualization and present relevant details in a structured format.
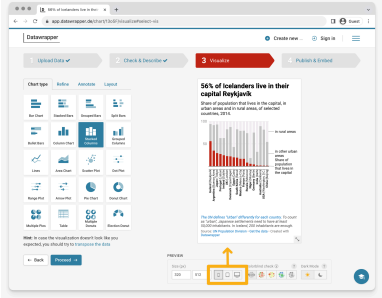
Instructions:

- Select a partner.
- Identify the different online applications for data visualization.
- Select three (3) open source applications for data visualization.
- Explore these tools. Provide the following details organized in a table (Software, Description, Tools/Features, Sample Screenshots, its parts and functions)
- Identify different mobile applications that you can use for data visualization. (Software, Description, Tools/Features, Sample Screenshots).

Open Source Applications

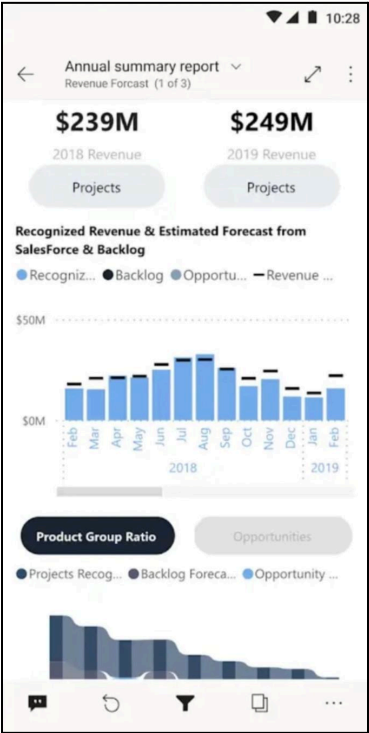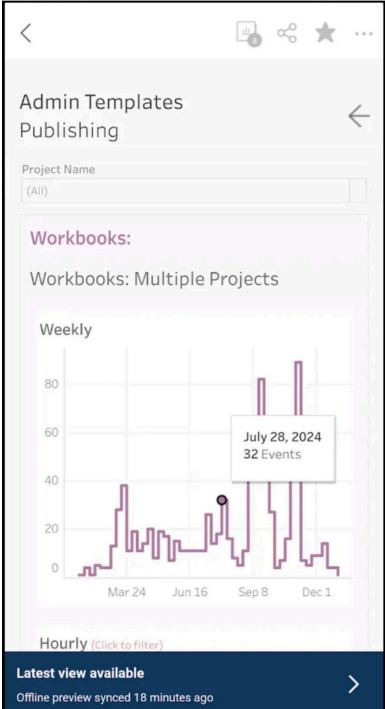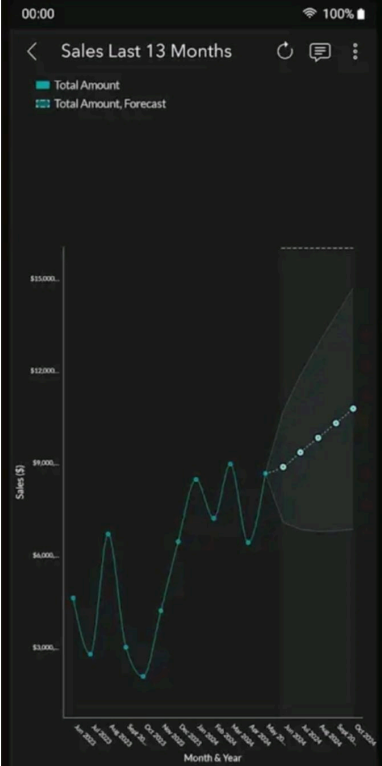| Software	Description	Tools/Features	Sample Screenshots	Parts and Functions
GRAFANA	Open-source platform for real-time dashboards and time-series analytics	Supports multiple data sources (e.g., MySQL, PostgreSQL, Prometheus)		Panels are the basic building block in **Grafana** composed of a query and a visualization, a graphical representation of query results
		Grafana has alerting system that centralizes all of alerts in one simple UI		**Grafana live** offers real-time data connection that listen to events happening on the data
		Plugins at ecosystem that enables third-party apps to collaborate and render the data		If a user needs other data sources, Grafana offers installing of one of the many data source plugins
D3.js	JavaScript library for creating dynamic, browser-based visualizations	Supports SVG, HTML, and CSS integration which makes the programmer more flexiblity than being limited.		Uses DOM manipulation for rendering graphs, just like html websites.
		Interactive and animated charts		D3.js provides tools for mapping data values to visual

		Javascript itself has Extensive API for custom visualizations, this feature is one of its strongest feature amongst its competitiors		representations, such as positions on an axis or colors in a chart. D3.js includes tools for creating and displaying geographic maps and data.
Datawrapper	Tool for creating embeddable charts, maps, and tables (ideal for journalism)	Compare to other application which requires programming skills, this supports Drag-and-drop interface Responsive designs for mobile and web interface.	 SUGGESTION FOR A COLORBLIND-SAFE PALETTE FROM THE INTERNET	**Datawrapper** focuses on simplicity and accessibility, it even has four life cycle only **Four-step workflow:** Upload data → Visualize → Annotate → Embed. Datawrapper offers an API for programmatic interaction with charts, allowing for automation and scalability.

		Datawrapper supports bar charts, line graphs, heatmaps, and geographical maps, making it a versatile tool for data storytelling.		For users with color blindness, Datawrapper includes a colorblindness simulator to ensure visualizations are accessible to all users.

Mobile Applications

Software	Description	Tools/Features	Sample Screenshots	Parts and Functions
Microsoft Power BI Mobile	It is a mobile application that helps see and explore data using charts and reports on phone or tablet.	● Real-time dashboards ● Interactive charts ● Filters to view specific data ● Alerts when data changes		**Dashboard** - Shows important numbers and updates. **Reports** - Allows clicking and exploring the data. **Menu Bar** - Helps on moving between pages **Alerts** - Notifies when something important happens.
Tableau Mobile	It is a mobile application that allows for opening and using of data reports on the go. It works best if reports were already made in Tableau on a computer.	● Touch-friendly charts ● Filters and drill-downs ● Works offline ● Face/fingerprint login ● Mark favorites		**Home** - Shows recent and favorite dashboards **Charts Page** - Allows for tapping and exploring visuals. **Filters Panel** - Helps focus on certain parts of the data. **Navigation Bar** - Allows switching between dashboards.

| Zoho Analytics – Mobile BI | It is a mobile application that helps check business reports and dashboards anytime and anywhere. It is good for collaboration use too. | ● Easy to read reports

● AI-powered insights

● Offline viewing

● Share and comment on reports

● Simple layout | | **Reports Tab**
- Lists charts and tables

Dashboard Tab
- Combines reports in one screen

AI Assistant
- Answers questions about the data

Comment Section
- Add notes and talk with teammates |

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Honor Pledge

"I accept responsibility for my role in ensuring the integrity of the work submitted by the group in which I participated."