Questions:

1. What is the application all about?
2. How does the application work?
3. How to cluster students?
4. How can I make an event report?
5. How do I visualize the student data analytics
6. How can I filter students based on attributes like year level, course, or age?
7. What does clustering do, and how is it useful?
8. How do I highlight the student population distribution?
9. Can I see which students are affected by floods or transportation issues?
10. What kind of reports can I generate from the application?
11. How can I navigate between different campuses on the map?
12. How does the system determine the shortest route for students?
13. What types of charts or graphs are available for event reports?
14. How can I upload student data using a CSV file?
15. What should I do if I uploaded the wrong CSV file?
16. How can I remove a previously uploaded student dataset?
17. How can I create a geospatial event for specific incidents?
18. Can I edit or delete an event report once it's created?
19. Is there a way to customize the radius for campus proximity visualization?

Answers:

1. The application is a Web GIS Application. You can analyze and gather insights on student spatial data. This can help make informed decisions and better planning of the institution.
2. The application works by using the tools on the top of the map which is the navigation bar. There you can cluster, make geospatial events, visualize student data analytics and many more. You can also filter the clustered students based on their attributes (e.g. year level, age, course, strand and previous school attended. Additionally, you can click on the cluster student icon and it shows the nearest path to the campus.
3. You can cluster the students either senior high or college student by simply clicking the cluster button on top of the map.

4. You can make an event report by clicking on the geospatial event tool and click a polygon for example square, pentagon.
5. You can visualize/see the student data analytics page by clicking the Data Analytics on top of the map which is the navigation bar.
6. You can filter students after you cluster them. You can choose which markers to be shown on the map depending on the filtered attribute.
7. Clustering provides geospatial insights to look where most students came from based on their address, previous school, and demographics. The university can use this data to make better informed decision making, advertisement and provide student support when needed.
8. Once you cluster either college or senior high, the population distribution radius automatically appears and displays the number of students nearby the campus and inside the radius.
9. Yes, you can see which students are affected by floods or transportation issues or other issues listed on the choices. You can only see them after you have made event reports by using the geospatial event tool to highlight which part of the map that issue or incident occurs.
10. You can generate reports like how many students are affected, where that event / incident occurs and you can have your own insights or plan by using the geospatial event tool and come up with your own geospatial analysis.
11. You can navigate different campuses on the map by toggling the layers control on the map.
12. The system determines the shortest route for a student using the Haversine formula, a mathematical formula used to calculate the great-circle distance between two latitude-longitude points on a sphere. This approach helps estimate the direct distance between the student's location and the nearest campus. When a user clicks on a student marker icon on the map, the system automatically computes and generates the shortest path from the student's location to the designated campus. The route is then displayed visually on the map, allowing users to analyze proximity and accessibility. This feature helps in transportation planning, identifying students with longer commutes, and improving campus accessibility insights.
13. The types of chart or graphs are available in for event reports are bar graphs, pie charts and line graphs. The types of charts or graphs that are used depends on the analysis being used.
14. You can upload a student data using CSV file if you are an admin or super admin. Admins or super admins are responsible in uploading CSV files.
15. There won’t be an issue with that because the system has error handlings in which only the correct file will be used and uploaded.

16. You can remove a previously uploaded student dataset if you are an admin. There is a page for handling upload and removal of datasets.
17. You can create a geospatial event for specific incidents by using the geospatial event tool. First you have to cluster the student to show markers on the map, and then use the geospatial event tool to draw shapes to highlight which students and where is the affected area. That data will be stored in the database then to be retrieved on the event reports page where different charts, graphs, and table are displayed to provide insights and analysis.
18. You can delete it but you cannot edit it. However, you can view where the event took place. This feature is found on the event reports page in the table part.
19. Yes, you can customize the radius for campus proximity visualization by adjusting the slider on the navbar.