

ABSTRACT

River is a part of earth's surface located lower than surrounding land and become the place where water flows to the sea, swamps, lakes, and other rivers. One of the longest river in West Java is Citarum river. There are many citizens lives along this river. They often use the river's water to fulfil their daily needs. But at the moment, Citarum river is polluted by human activities. Greencross Switzerland and Blacksmith Institute tell that Citarum river is the most polluted river in the world. It can be seen by how many industrial of factory along this river.

From that situation, it is necessary to maintain the river. One of those ways is to monitor the watershed points which are often used as dumping sites. Therefore, this research designs and build prototype using a pH sensor, temperature sensor, and turbidity sensor to monitor which of the watersheds pollute several points of the river. With the existing information the collected data will be input to the mobile application which able to monitor the water quality along the several of the selected river points.

At this final task the author devised an Android-based mobile application to monitor water quality in the watershed area. Data about the condition parameters in watershed will be displayed in realtime and processed into a daily report on the mobile application.

Functionality testing results, all features of the mobile app can be run properly. For delay testing from the database to the mobile application conducted in 6 trial sessions obtained the lowest average delay of 0.239 s and the average delay of the highest of 0.323 s, so it can be concluded that the delay is quite good.