

Transferring Data from Glucometer to Mobile Device via Bluetooth with Arduino Technology

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Abstract : Being healthy is undoubtedly an indispensable necessity for human life. With technological improvements, in the literature, various health monitoring and imaging systems have been developed to satisfy your health needs. In this context, the work of monitoring and recording the data of individual health monitoring data via wireless technology is also being part of these studies. Nowadays, mobile devices which are located in almost every house and which become indispensable of our life and have wireless technology infrastructure have an important place of making follow-up health everywhere and every time because these devices were using in the health monitoring systems. In this study, Arduino an open-source microcontroller card was used in which a sample sugar measuring device was connected in series. In this way, the glucose data (glucose ratio, time) obtained with the glucometer is transferred to the mobile device based on the Android operating system with the Bluetooth technology channel. A mobile application was developed using the Apache Cordova framework for listing data, presenting graphically and reading data over Arduino. Apache Cordova, HTML, Javascript and CSS are used in coding section. The data received from the glucometer is stored in the local database of the mobile device. It is intended that people can transfer their measurements to their mobile device by using wireless technology and access the graphical representations of their data. In this context, the aim of the study is to be able to perform health monitoring by using different wireless technologies in mobile devices that can respond to different wireless technologies at present. Thus, that will contribute the other works done in this area.

Keywords : Arduino, Bluetooth, glucose measurement, mobile health monitoring

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