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| **Abstract:** |  |
|   Abstract— Electrocardiographic (ECG) machine is an important equipment to diagnose heart problems. Besides, the ECG signals are used to detect many other features of human body and behavior. But it is not so cheap and simple in operation to be used in the countries like Bangladesh, where most of the people are very low income earners. Therefore, in this paper, we have tried to implement a simple and portable ECG machine. Since Arduino Uno microcontroller is very cheap, we have used it in our system to minimize the cost. Our designed system is powered by a 2-voltage level DC power supply. It provides wireless connectivity to have ECG data either in smartphone having android operating system or a PC/laptop having Windows operating system. To get the data, a graphic user interface has been designed. Android application has also been made using IDE for Android 2.3 and API 10. Since it requires no USB host API, almost 98% Android smartphones, available in the country, will be able to use it. We have calculated the heart rate from the measured ECG by our designed machine and by an ECG machine of a reputed diagnostic center in Dhaka city for the same people at the same time on same day. Then we calculated the percentage of errors between the readings of two machines and computed its average. From this computation, we have found out that the average percentage of error is within an acceptable limit. | |