Human pregnancy starts from the 1st day of the last menstruation and normally lasts 40 weeks (280 days). If the baby is born before completing 37 weeks, it is regarded as premature. While premature babies are smaller than others, their internal organs are underdeveloped. When suitable environment and conditions for these babies are not provided, baby cannot fully complete development. Incubators are devices that help premature or problematic-born babies become able to maintain vital functions without aid. In incubators, body temperature, heart rates, breathing conditions and pulsations are measured as standard. Also optionally, phototherapy machine, which is used in cases of physiologic jaundice, is present.

In the study, baby’s body temperature, cabin temperature, fresh air entering the cabin and cabin humidity values are checked by sensors, and the suitability of these values are evaluated by a microcontroller unit. All the measurements done are seen transiently on the touch LCD panel on the incubator and suitable values are set. In order to make babies’ transient checking process easier and safer, all the measurement values and the system’s operating condition would be able to be monitored simultaneously from a remote mobile device through a mobile program made for android devices or bluetooth connection. In case of any problems, attendance to baby would be provided immediately by warning and alerting the relevant persons. As well as simultaneous monitoring, baby’s entire health data from the moment of entrance to the incubator would be saved to a database and these data would be remotely accessible by mobile devices. Phototherapy machine used in treatment of physiologic jaundice is added to the incubator system, and made able to be turned on and off within desired times through a timer on both the panel and mobile app.