

## Design and Implementation of a Mobile Application for Premature Babies

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### Abstract

**Background:** Being born premature is the biggest global factor of mortality in young children all around the world. Preterm birth, which occurs before the full 37 weeks of pregnancy, leads to requirement of complex medical care and maybe a longer hospital stay in all premature babies. Parents of premature babies often go through many emotional ups and downs in the early weeks and months of their baby's life. In this work, we developed a mobile application (app) named NONAHAL (premature baby) for helping parents meet their preemies requirements.

**Objectives:** The aim of this study was to increase the family's knowledge about the fact and attendance of parents in evolution stages of their premature babies as well as creating an atmosphere for interlocution between parent's and the medication board.

**Methods:** Development of NONAHAL is included of 8 phases and the application is developed by agile developing methodology. By using the scrum technique in the analyze and design phase, at the end of each process and after specifying the workflow, user interface experience design is accomplished with psychological viewpoints in color and shape aspects. These aspects are specially implemented for each part separately.

**Results:** The app contains all the prematurity information. The application also has all the following features: Week by week development, allowing parents to share events, thoughts and milestones by other parents, evaluation of stress in parents, as well as evaluation of the NICU department in each hospital.

**Conclusion:** With respect to the fact that the application is developed for preemie's parents who are in a touchy period of time, the design process is custom, joyful, attractive, and soothing in all stages.

**Keywords:** Mobile Healthcare; Agile Methodology; UI/UX Design