Project Design Phase-II
Data Flow Diagram & User Stories

Date	03 October 2022
Team ID	PNT2022TMID48274
Project Name	IoT based
Maximum Marks	4 Marks

Data Flow Diagrams:

A Data Flow Diagram is a traditional visual representation of the information flows within a system. A neat and clear data flow diagram can depict the right amount of the system requirement graphically. The counter should be started for counting time. The sensors output data should be read from the child safety device. The counter time should be checked for time interval of 30minutes. For every 30minutes except serial camera, the data from GPS, temperature, touch, pulse rate data is pushed into the cloud. The monitoring parameters are displayed on webpage. The counter is reset to restart the timer. So as to post the data into the cloud for every 30minutes. The sensors data is continuously read by the controller. When the value of temperature read from the sensor crosses the threshold-1, notification messages are sent. The threshold value of the temperature is considered here is 38°C. Similarly, when the touch sensor value is crosses threshold-2, notification messages are sent. Threshold of the touch sensor is considered here is 100. The Pulse rate interval is analog value from the sensor, it is converted into the beats per minute (BPM) by formulae. Three threshold are used threshold1 is 38°C for Temperature sensor, threshold2 is 100 for Touch sensor and threshold3 is 400 for Heartbeat sensor.

```
                          ┌──────────┐
                          │  Start   │
                          └────┬─────┘
                               │
                          ┌────┴──────────┐
                          │ Start counter │
                          └────┬──────────┘
                               │
              ┌────────────────┴────────────────────┐
              │ Read the process output data (GPS,   │
              │ temp, pulse sensors)                 │
              └────────────────┬────────────────────┘
                               │
         ┌──────┐              ◇
         │ Yes  │    Check if counter>30 mins
         └──────┘
    ┌─────────────────┐
    │ Update to cloud │
    └────┬────────────┘
         │
    ┌────┴──────────┐        ┌──────┐
    │ Reset the     │        │  No  │
    │ counter       │        └──────┘
    └───────────────┘             │
                                  ◇
                        Check if temp> threshold1
    ┌──────┐
    │ Yes  │
    └──────┘                ┌──────┐
                            │  No  │
                            └──────┘
                                  │
                                  ◇
                        Check if Touch sensor < threshold2
    ┌──────┐
    │ Yes  │
    └──────┘                ┌──────┐
                            │  No  │
                            └──────┘
                                  │
                                  ◇
                        Check if pulse rate < thres hold3
    ┌──────┐
    │ Yes  │
    └──────┘                ┌──────┐
                            │  No  │
                            └──────┘
    ┌──────────────┐
    │ Send SMS     │
    └────┬─────────┘
         │
    ┌────┴──────────────────────┐
    │ Send photo of the capture │
    │ image                     │
    └───────────────────────────┘
```