

Requirements captured as on 9th April 2014.

A. Admission Form:

1. Calculate Expected Due Date: There will be three ways of calculating the EDD

a. From Last Menstrual Period (LMP)

EDD = LMP + 280 days

Current month + nine month + 7 days

(e.g. if LMP is 13 October 2013 , then EDD calculated will be 20 July 2014)

b. From the following parameters

1. Date of Ultrasound

2. Gestation specified by the doctor on the date of ultrasound

(e.g. if Date of Ultrasound is 10 April 2014 , Gestation

specified is 23 weeks then EDD calculated will be 40 weeks - 23 weeks = 17 weeks (17 * 7 = 119 days)

Add 17 week time to 10 April 2014 which comes around 7 August 2014. For User Interface, one date picker box should be available to enter Date of ultrasound, and two text boxes to enter gestational age in weeks and days

c. In case of In vitro Fertilization, following parameter will be specified

1. Date of Conception: EDD calculated will be Date of Conception + 266 days /38 weeks

2. Calculate Gestation Age: For this the following parameters are needed

a. LMP

b. The user will specify the date for which he/she wants the gestational period to be calculated.

B Initial Examination

1. Replace Left Red Reflex and Right Red Reflex with Left and Right.

2. Separate out the Right and Left table from OFC section and the Palate, Mouth etc. table from Birth Weight section.

3. The variable "Tone" specified in Left section should be moved to right section.

4. Centile Calculations

The fixed parameters for calculating the Centile are

a. Gestation Period

b. Sex of the baby

The variable parameters are (Any one of the following parameter can be used to calculate the centile)

a. Birth

b. Length

c. Head Circumference

The Initial Examination screen should have the option of prompting the user to enter any of these values and calculated centile value should be displayed.

5. The Birth Weight once entered should be reflected in all the screens

C. Nursing Progress Notes

1. Since we need more space here, we will remove the menu option on the left and will have a home button, which on click will direct the user to home page

2. This screen should have the text boxes with labels

a. Yesterday's Weight: This text box should be pre-populated from the "Today's Weight" section of previous day.

b. Today's Weight: Once entered, the next text box should display the following two things

A. Weight gain or Weight loss

B. By how much quantity is there a gain or loss?

3. There should be two more text boxes with label

a. Gestation Period, which will be calculated from LMP and the current date

b. Centile value which should be the same as in Initial Examination screen (calculated from birth weight).

4. The table shown which include Volume, Aspirate/Vomit, etc. should have smaller text boxes for better space utilization. The main idea is to get rid of scroll bar, which is currently being used to scroll the entire row.

5. The column **Time** should have the values

08,09,10.....23,24

6 The Feed type section should have a combo box with following options

a. N/G

b. Bottle

c. Breast

7. The Aspirate/Vomit should have the measuring unit (ml) also included.

8 Replace PU(ml/kg/hr) with Urine(ml)

9. Also include % with SaO₂.

10. BP label should be next to HR and RR labels.

11. The highest and lowest values of HR , RR and SaO₂ should be displayed for every hour. So a partition will be needed under these labels for the values to be displayed.

12. Urine calculation: The rule is that a baby should pass 1 ml / per kg /per hour urine.

e.g. if a baby with 1.5 Kg weight has passed 20 ml urine at 9:00 a.m and 15 ml urine at 1:00 p.m. ,the calculation for identifying the quantity of urine passed at the end of 4 hour should be

$$20 + 15 = 35 \text{ ml}$$

$$35/1.5 = 23.3 \text{ ml}$$

$$23/4 = 5.75 \text{ ml}$$

For User Interface I suggest having a separate Urine calculator section at the end where the nurse will be prompted to enter the start time and end

time and the urine quantity will be calculated. Please advise Dr . Raghu.

13. There should be two text boxes after the last 24-hour row, labeled Total and Average. For now, it should calculate these values for I.V and Urine

E. Medication: Regular Medication

1.This screen should only be available to the doctor as this screen allows the doctor for prescribing medicines. Each doctor will be assigned a code. Any prescribed medication will be associated with the logged in doctor's code and audit history will be maintained.

2. Under Medicine Name section, predictive text option should be available.

3. Replace Dose Timing with Doses and it will allow the doctor to enter a number reflecting how many times this dose should be given.

4. Two buttons with labels Prescribe and Stop should be available on this screen. The function of these buttons should be follow:

a. On clicking Prescribe button the medicines prescribed information should be available to the nurse on her Nurse Administration screen.

b. On clicking the Stop button, the nurse should be informed to stop the medicines.

5. Also, the name of the doctor should be maintained who has stopped the medicines.

6. Since the dose value will be automatically calculated based on present weight, the weight should be rounded off to the nearest decimal place.

F. Every nurse will be associated with a code as well, which she will use to log in the application. The Nurse Administration chart should be updated everyday, with the list of medicines prescribed for this specific UID and the dose timings as well.