P1.

None

P2.

The use of rand() function in C will produce random integer result and to make the generation more random, srand(time()) is used. Modula 4 will ensure that the result falls in a acceptable range—we only have four types of bubbles to fire up. Plus 1 is to shift to fit in the definition of bubble colorType definition.

Using rand() will make the game fun and not that predictable

P3.

P4.

P5.

P6.

Integration testing:

Bells & Whistles:

1. Bubble-burst animation for bubble-bomb, bubble-star and bubble-lightning only
2. Game score in label format
3. Number of shots left in UISlider format
4. More special bubble
5. Candy-red: when touched by the fired bubble, it is considered to be of the same color as fired bubble. The effect will only triggered by direct touching
6. Candy-green: when touched by the fired bubble, it will be removed and the fired bubbled will be removed too. Also it has higher score
7. Bubble shaking animation when snapping to a grid
8. End game scene in the form of plain alert view

Final Reflection:

Bonus Problem:

1. Well, I am not sure how to answer this question. I spent about 70+ hours in total as the whole recess week is gone because of this. Probably Bells & Whistles, Integration and Crafting take a lot of time. Also, restructuring was done again at the beginning of recess week. That is tricky too.
2. A lot of restructuring happened because of bad design in the first place.
3. Thanks for the feedback. If only the clarification was better stated in the first place, everything will be great.
4. For some questions involving software design, I am not pretty sure and probably personally I need more suggestion and criticizing on my design. Or some alternatives can be communicated or something like that—I mean I think of my own design but I want to learn about others and better designs too. I spent a lot of time restructuring and improve the design every time but even now I am not pleased about what I have now. Just I am a bit too tired now and time does not permit.