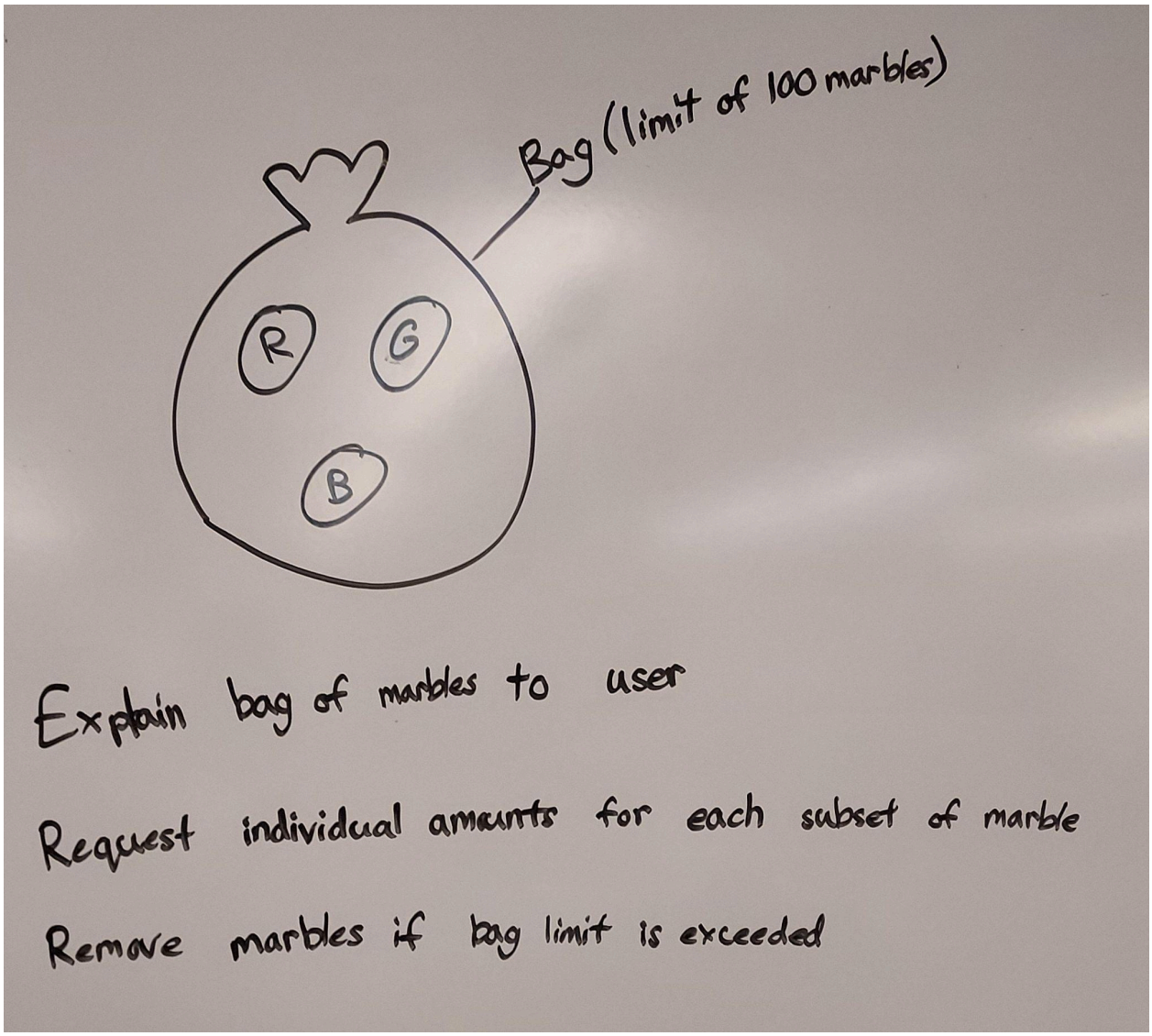
Design:
The marbles could be represented by colors. Such as red, green, and blue.
The user could input a desired amount of marbles for each type of marble.
Marbles could be removed from the bag when the user exceeds a certain limit.
To test the code we could input three random integers for the amount of each marble. Then we can check to see if the bag limit was exceeded.



Requirements:

Attempt to implement your bag of marbles in a program **as simply as possible**

```
You have a bag that can hold up to 100 red, green, and blue marbles.
The marbles will fall out of the bag if you exceed the limit.
How many red marbles would you like in your bag? 20
How many green marbles would you like in your bag? 5
How many blue marbles would you like in your bag? 35
In your bag there are 20 red marbles; 5 green marbles; and 35 blue marbles.
```

The user can input integers for the number of each subset of marble. The program saves those numbers and ensures that the bag limit of 100 is not exceeded.

test our implementation in a driver file with our tests

```
107  bool test() {
108      int max_num = 150;
109      srand(time(0)); // random seed for rand
110      int red_input = rand() % max_num;
111      int green_input = rand() % max_num;
112      int blue_input = rand() % max_num;
113      int total_count=0;
114      int red_count;
115      int green_count;
116      int blue_count;
117
118      red_count = marble_editor(red_input, total_count);
119
120      total_count = red_count;
121      green_count = marble_editor(green_input, total_count);
122
123      total_count = red_count + green_count;
124      blue_count = marble_editor(blue_input, total_count);
125
126      total_count = red_count + green_count + blue_count;
127
128      cout << "\n\n-------TESTING BAG LIMIT------\n";
129
130      if (total_count > 100) {
131          total_count = reduce_marble_count(red_count, green_count, blue_count, total_count);
132          if (total_count > 100) {
133              return false;
134          } else {
135              return true;
136          }
137      } else {
138          cout << "In your bag there are " << red_count << " red marbles; " << green_count << " green marbles; and " << blue_count << " blue marbles.";
139          return true;
140      }
141  }
```

This tests inputs three random integers for each type of marble. Then it checks whether the bag limit was exceeded. If it was exceeded there is an error.