One solution (out of many possible solutions) is given below:

Answer to the question 1:

```
class Item {
    int code;
    String food_name;
    public Item (String n, int c){
        code = c;
        food_name = n;
    }

    void item_brought(double amount){ }
    void item_sold (double amount) { }
    double calculate_total_stock_price() { return -1;}
}

class Egg extends Item {
    int pieces_in_stock;
    double price_per_piece;
    String type;//hen duck
    String size; //small large
    public Egg (String name, int code, int ps, double pp, String t, String s){
        super(name, code);
        pieces_in_stock = ps;
        type = t;
        size = s;
        price_per_piece = pp;
    }
    void item_brought(double pcs){
        pieces_in_stock+= (int)pcs;
    }
    void item_sold(double pcs){
        pieces_in_stock-= (int)pcs;
    }
    double calculate_total_stock_price(){
        return pieces_in_stock*price_per_piece;
    }
}

class Grain extends Item {
    double price_per_100gms;
    double kilograms_in_stock;
    public Grain (String name, int code, double pr, double amount){
        super (name, code);
        price_per_100gms = pr;
        kilograms_in_stock = amount;
    }
    void item_brought(double amount){
```

```
        kilograms_in_stock+= amount;
    }
    void item_sold(double amount){
        kilograms_in_stock-= amount;
    }
    double calculate_total_stock_price(){
        return kilograms_in_stock*(price_per_100gms*10);
    }
}

class Rice extends Grain {
    double coarseness; //o for thick and 1 for thin
    public Rice (String name, int code, double pr, double c, double am){
        super (name, code, pr, am);
        coarseness = c;
    }
}

class Wheat extends Grain {
    double fiber; //0 for white, 1 for red
    public Wheat (String name, int code, double pr, double f, double am){
        super (name, code, pr, am);
        fiber = f;
    }
}

class Demo {
    public static void main(String[] args) {
        System.out.println("Hello, World!");
        Item item;
        item = new Egg("Hen_Egg", 101, 100, 8, "Hen", "Large");
        System.out.println(item.calculate_total_stock_price());
        item.item_sold(5);
        System.out.println(item.calculate_total_stock_price());
        item.item_brought(1);
        System.out.println(item.calculate_total_stock_price());

        item = new Rice ("Coarse", 102, 60, 0, 15);
        System.out.println(item.calculate_total_stock_price());

    }
}
```