

Question 2

Answer:

Initial: 8 4 7 2 9 4

After first iteration: 2 4 7 8 9 4

After second iteration: 2 4 7 8 9 4

After third iteration: 2 4 4 8 9 7

After fourth iteration: 2 4 4 7 9 8

Question 4

Answer:

Queue elements:

9 1 8 6 4

Question 5

Answer:

A possible solution is given below:

```
(i) class Property
{
    protected String owner;
    protected double value;

    Property(String s, double d)
    {
        owner = s;
        value = d;
    }
}

(ii) class House extends Property
{
    private double r1,r2;
    private int band;

    House(String o, double v, double rt1, double rt2)
    {
        super(o,v);
        r1 = rt1; r2 = rt2;
        if (value <= 100000) band = 0;
        else if (value <= 500000) band = 1;
        else band = 2;
    }

    double houseTax()
    {
        return value*(r1 + r2* band);
    }
}
```

```
(iii) class Shop extends Property
{
    private double r;

    Shop(String o, double v, double rt)
    {
        super(o,v);
        r = rt;
    }

    double shopTax()
    {
        return value*r;
    }
}

(iv) static double totalTax(ArrayList<House> a1,
                             ArrayList<Shop> a2)
{
    double total = 0;
    for (House h : a1) total += h.houseTax();
    for (Shop s : a2) total += s.shopTax();
    return total;
}
```