Q1)

I am class_1. My result is 20 → the Parenthessis too confusing so i did

I am class_2. My result is 14.

$2*[(1+3)+(2+4)]$

$2*10$

20

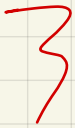
Q2)

```
import java.awt.*
import java.event.*
import java.swing.*
```

Single

```
public class Simple1
{
    private static JFrame frame;
    private static JPanel myPanel;
    private JButton button1;
    private JButton button2;

    public Simple1()
    {
        myPanel = new JPanel();

        button1 = new JButton("Button 1");
        button2 = new JButton("Button 2");

        SingleListener myListener = new SingleListener();

        button1.addActionListener(myListener);
        button2.addActionListener(myListener);

        myPanel.add(button1);
        myPanel.add(button2);
    }
}

public class SingleListener implements ActionListene
{
    public void actionPerformed(ActionEvent e)
    {
        if(e.getSource() == button1)
            jOptionPane.showMessageDialog(frame, "Button 1 pressed");

        else if(e.getSource() == button1)
            jOptionPane.showMessageDialog(frame, "Button 2 pressed");

        else
            jOptionPane.showMessageDialog(frame, "Unknow events");
    }
}
```

```
public static void main(String s[])
{
    Simple1 Single = new Simple1();
    frame = new JFrame("Simple1");
    frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    frame.getContentPane().add(myPanel)
    frame.pack()
    frame.setVisible(true);
}
```



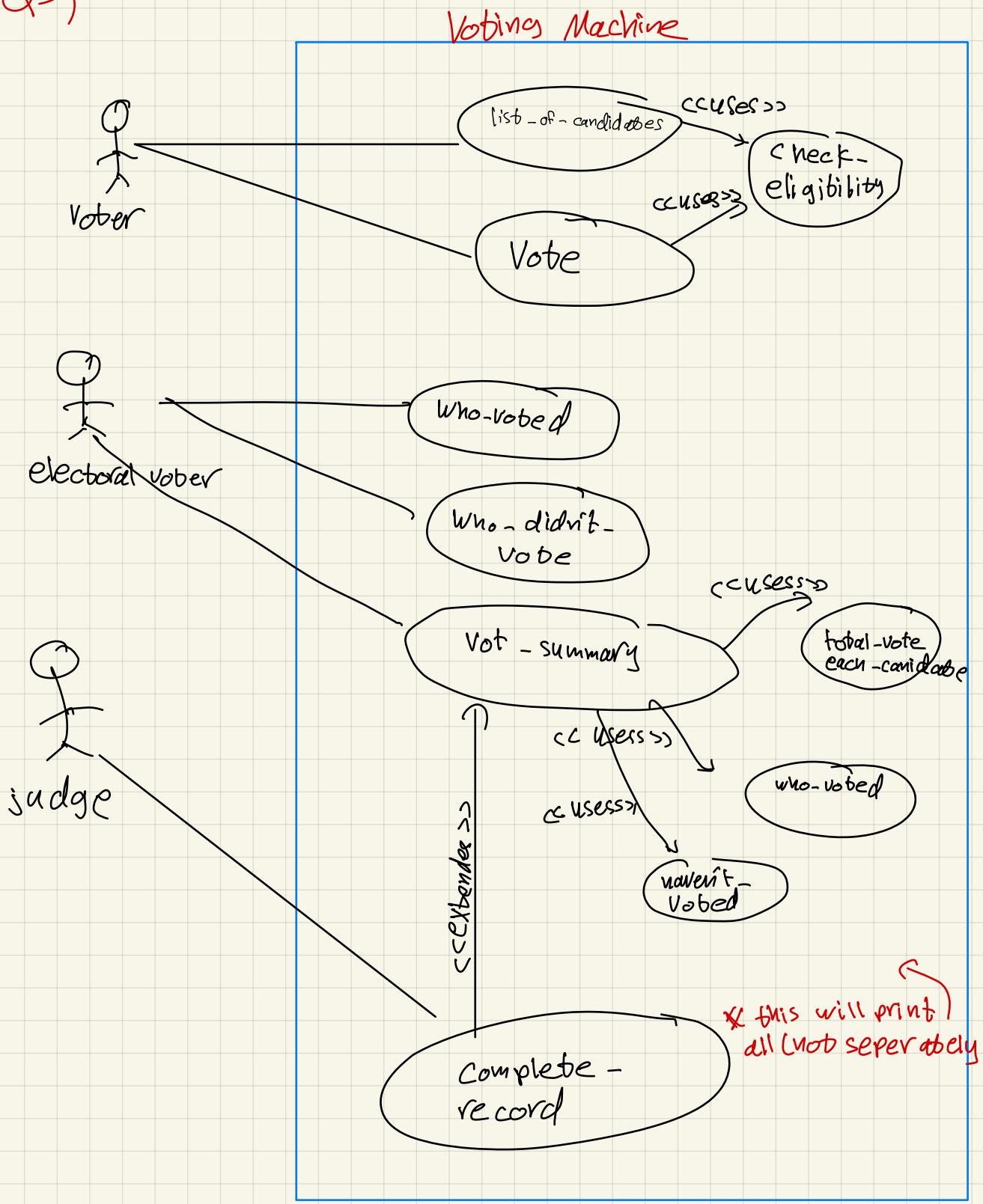
2 Inner

```
import java.awt.*
import java.event.*
import javax.swing.*

public class Simple2
{
    private static JFrame frame;
    private static JPanel myPanel;
    private JButton button1;
    private JButton button2;

    private class Button1Handler implements ActionListener
    {
        public void actionPerformed(ActionEvent e)
        {
            JOptionPane.showMessageDialog(frame, "Button 1 pressed");
        }
    }

    private class Button2Handler implements ActionListener
    {
        public void actionPerformed(ActionEvent e)
        {
            JOptionPane.showMessageDialog(frame, "Button 2 pressed");
        }
    }

    public Simple2()
    {
        myPanel = new JPanel();

        button1 = new JButton("Button 1");
        button2 = new JButton("Button 2");

        button1.addActionListener(new Button1Handler());
        button2.addActionListener(new Button2Handler());

        myPanel.add(button1);
        myPanel.add(button2);
    }
```

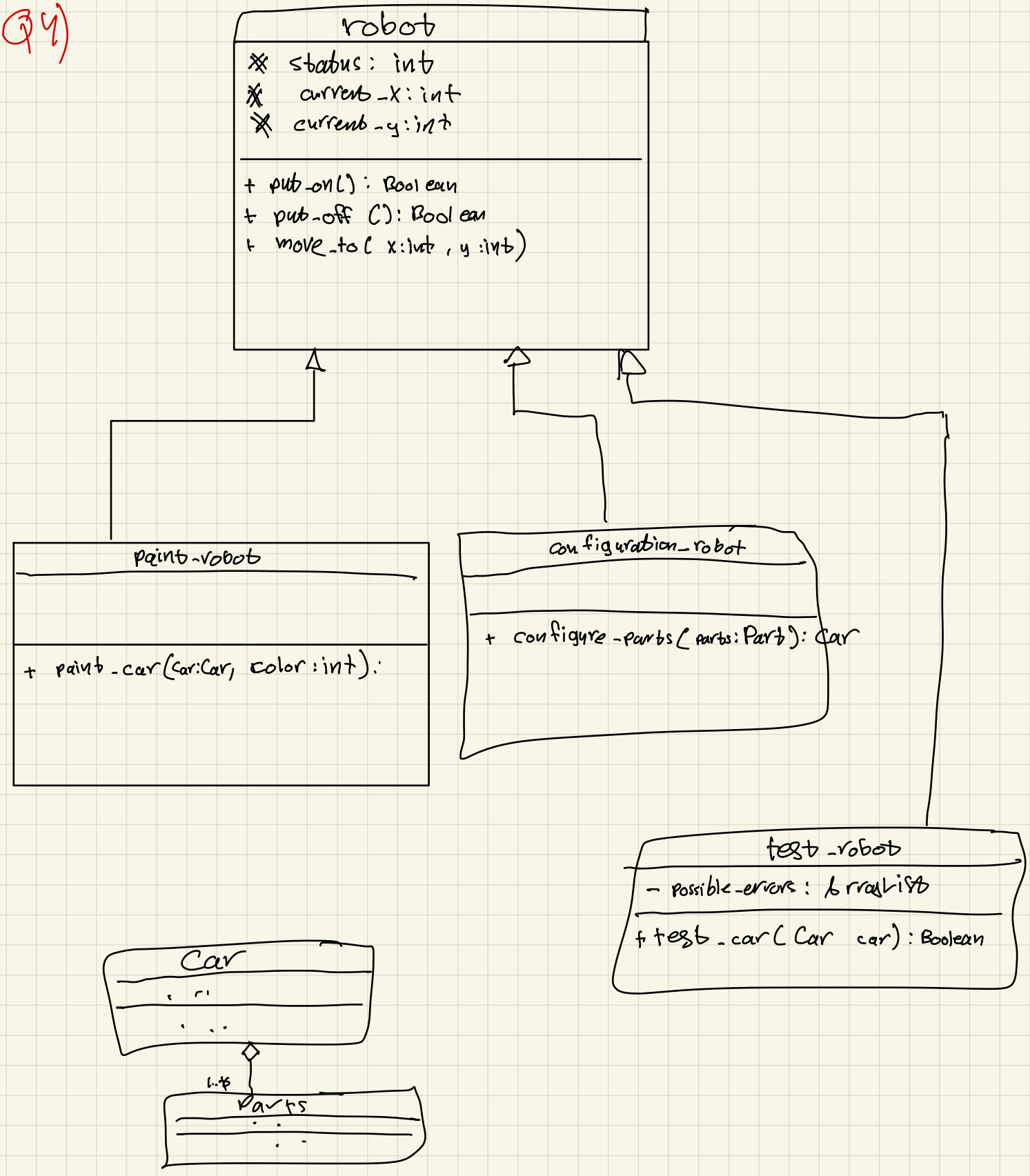
```
public static void main(String[] args)
{
    Simple1 single = new Simple1();
    frame = new JFrame("Simple1");
    frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
    frame.getContentPane().add(myPanel)
    frame.pack()
    frame.setVisible(true);
}
```

3

Q3)


Voting Machine
Voter
list_of_candidates
<<uses>>
check_eligibility
<<uses>>
Vote
electoral voter
who_voted
who_didn't_vote
<<uses>>
Vot_summary
total_vote each_candidate
<<uses>>
who_voted
<<uses>>
haven't_voted
judge
<<extender>>
Complete_record
* this will print all (not seperately

Q4)


robot
- status : int
- current_x : int
- current_y : int
+ put_on() : Boolean
+ put_off () : Boolean
+ move_to (x:int , y :int)
paint_robot
+ paint_car(car:Car, color :int).
configuration_robot
+ configure_parts (parts: Part): Car
test_robot
- possible_errors : ArrayList
+ test_car (Car car) : Boolean
Car
1..*
Parts

```
public class robot {

protected Boolean status;
protected int x_current;
protected int y_current;

    public Boolean put_on()
    {
        ...
    }

    public Boolean put_off()
    {
        ...
    }
    public void move_to(int x, int y)
    {
        ...
    }
}

public class paint_robot extends robot {

    public void paint_car(Car car, int color)
    {
        ...
    }
}
```

```
public class configuration_robot extendes robot {
{

  public Car configure_car ( ArrayList<Part> parts )
    {

      . .
    }

}

public class test_robot extendes robot

{     privat ArrayList possible_errors
      public boolean test_car ( Car car )
        {
        }  . .
}

public class Car {

    ArrayList<Part> parts;
  }

public class Part {

  }
```