1).a.

```
public class New {

        public static void main(String[] args) {
            double value_1 = 300.0;
            byte value_2 = (byte) value_1;
            System.out.println("value_2 = " + value_2);
        }

}
```

due to implicit type casting, 8 bytes double value's 7 bytes loss and only remain 1 byte that necessary for "byte" values. So the final value is 44. Due to huge memory overflow.

b.

```
public class New {
    public static void main(String[] args) {
        long value_1 = 2147483648L;
        int value_2 = (int) value_1;
        System.out.println("value_2 = " + value_2);
    }
}
```

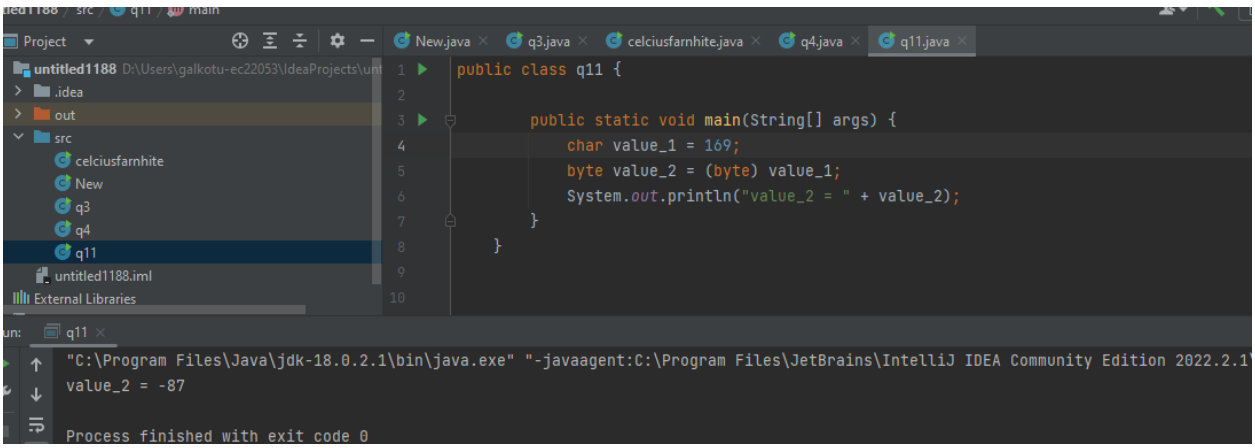
due to type casting 8 bytes long value change in to 4 byte int value. -2147483648. Range of long is -9,223,372,036,854,775,808 to 9,223,372,036,854,775,807. Due to cast the values got change due to overflow

c.

```
public class New {
    public static void main(String[] args) {
        short value_1 = -150;
        byte value_2 = (byte) value_1;
        System.out.println("value_2 = " + value_2);
    }
}
```

value_2 is 106. Short values store 2 bytes while byte store only 1 byte. So 1 byte is loss. Due to narrowing data got overflow

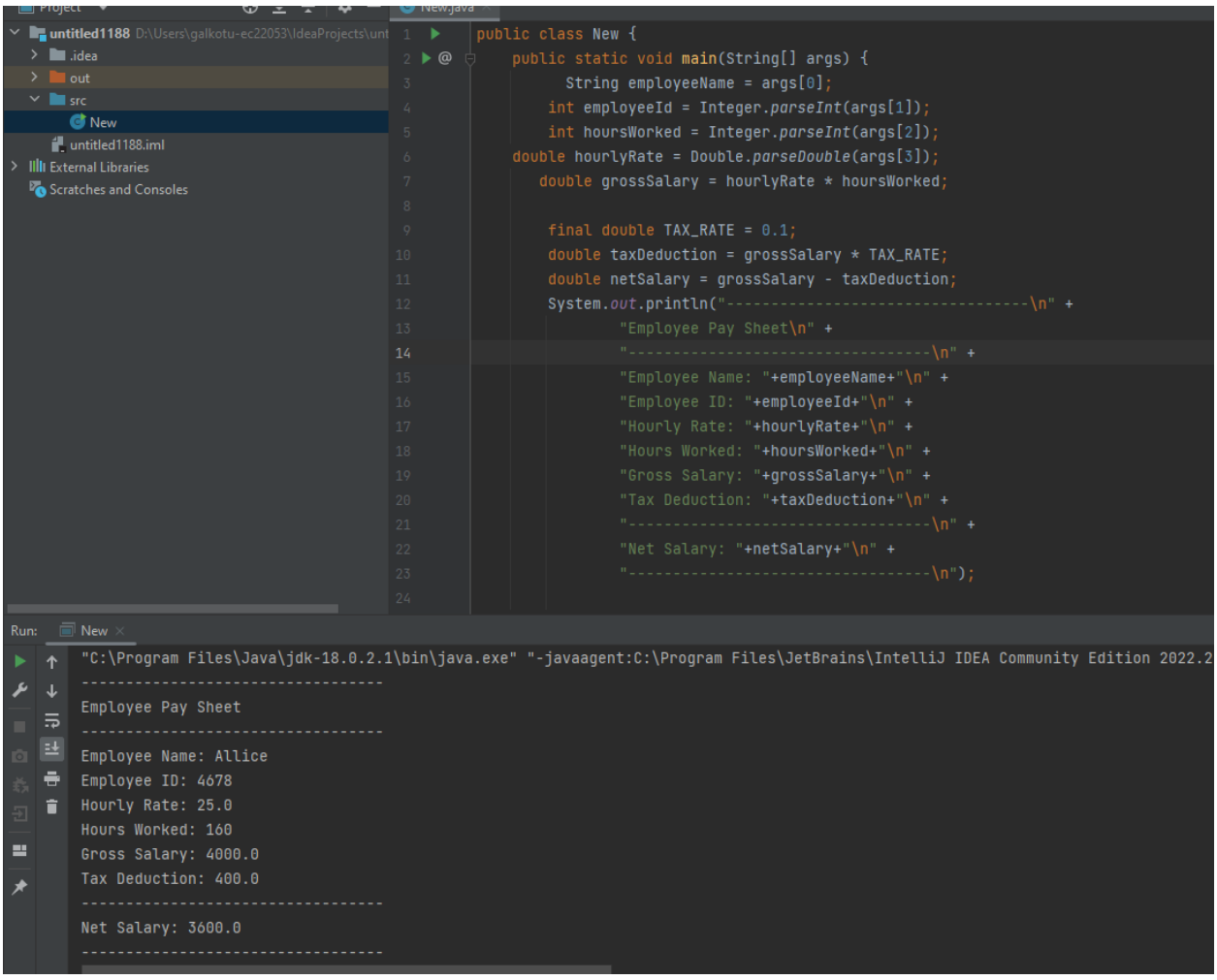
d.



Char contain 2 bytes and byte contain only 1 byte. So due to casting, data may be loss. Output is -87 and that came from 169-256 = -87. Due to loss of characters in that, the computer represent it that form. Due to memory overflow

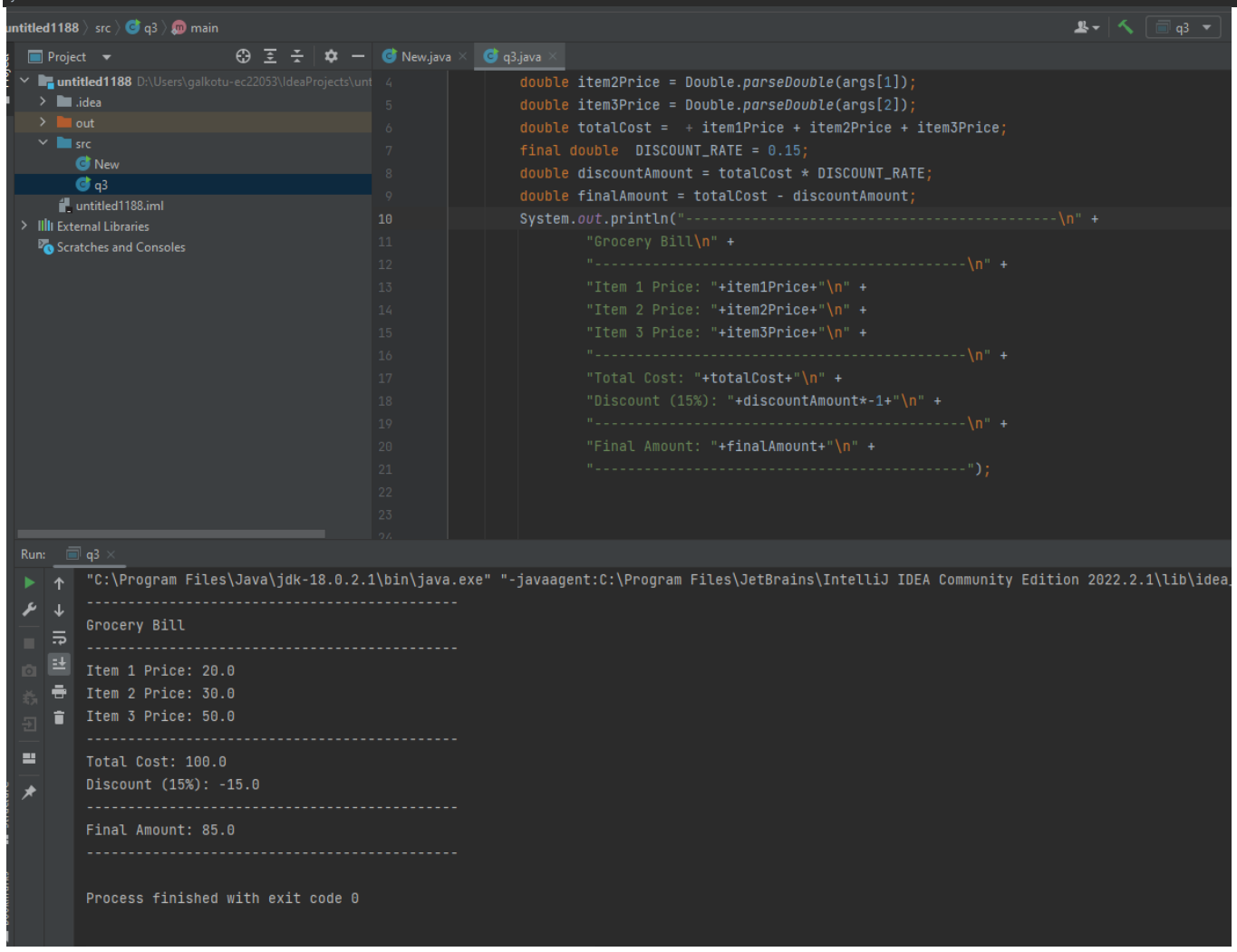
2.

```
public class New {
    public static void main(String[] args) {
          String employeeName = args[0];
        int employeeId = Integer.parseInt(args[1]);
        int hoursWorked = Integer.parseInt(args[2]);
    double hourlyRate = Double.parseDouble(args[3]);
       double grossSalary = hourlyRate * hoursWorked;

        final double TAX_RATE = 0.1;
        double taxDeduction = grossSalary * TAX_RATE;
        double netSalary = grossSalary - taxDeduction;
        System.out.println("-----------------------------------\n" +
                "Employee Pay Sheet\n" +
                "-----------------------------------\n" +
                "Employee Name: "+employeeName+"\n" +
                "Employee ID: "+employeeId+"\n" +
                "Hourly Rate: "+hourlyRate+"\n" +
                "Hours Worked: "+hoursWorked+"\n" +
                "Gross Salary: "+grossSalary+"\n" +
                "Tax Deduction: "+taxDeduction+"\n" +
                "-----------------------------------\n" +
                "Net Salary: "+netSalary+"\n" +
                "-----------------------------------\n");

    }
}
```



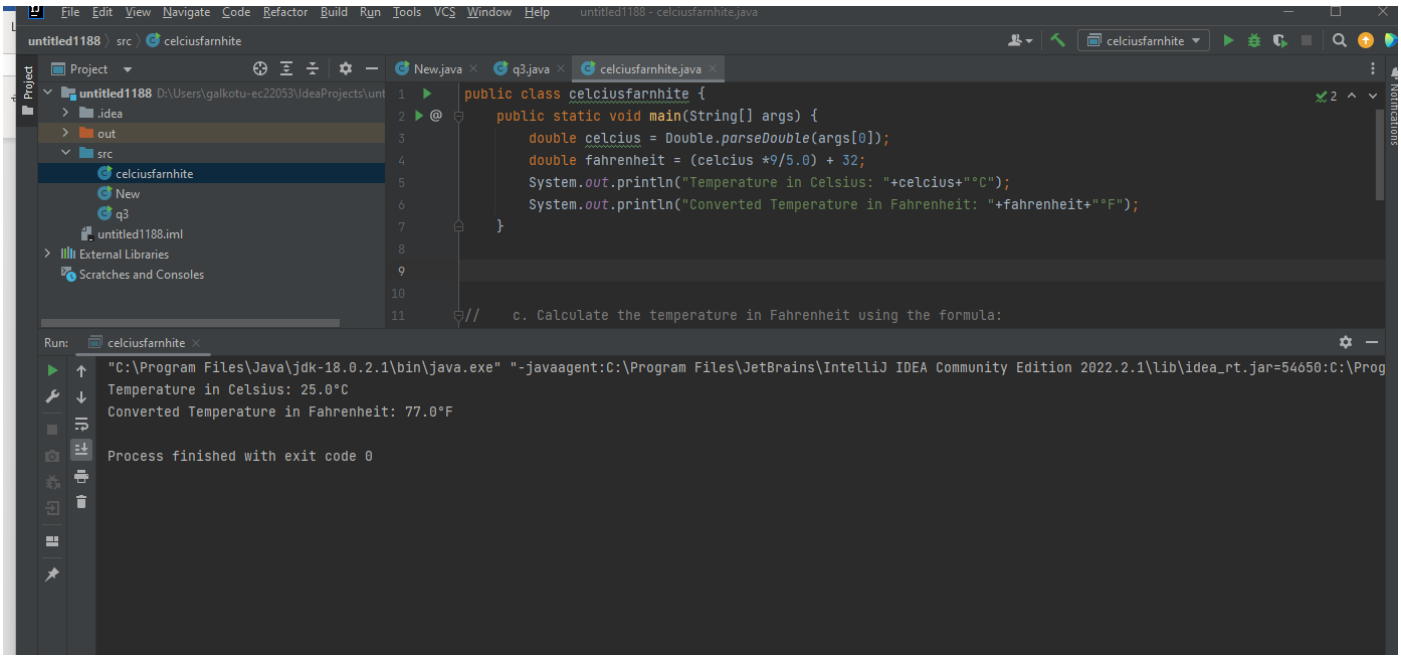
3.

```java
public class q3 {
    public static void main(String[] args) {
        double item1Price = Double.parseDouble(args[0]);
        double item2Price = Double.parseDouble(args[1]);
        double item3Price = Double.parseDouble(args[2]);
        double totalCost =  + item1Price + item2Price + item3Price;
        final double  DISCOUNT_RATE = 0.15;
        double discountAmount = totalCost * DISCOUNT_RATE;
        double finalAmount = totalCost - discountAmount;
        System.out.println("-----------------------------------------\n" +
                "Grocery Bill\n" +
                "-----------------------------------------\n" +
                "Item 1 Price: "+item1Price+"\n" +
                "Item 2 Price: "+item2Price+"\n" +
                "Item 3 Price: "+item3Price+"\n" +
                "-----------------------------------------\n" +
                "Total Cost: "+totalCost+"\n" +
                "Discount (15%): "+discountAmount*-1+"\n" +
                "-----------------------------------------\n" +
                "Final Amount: "+finalAmount+"\n" +
                "-----------------------------------------");
    }

}
```

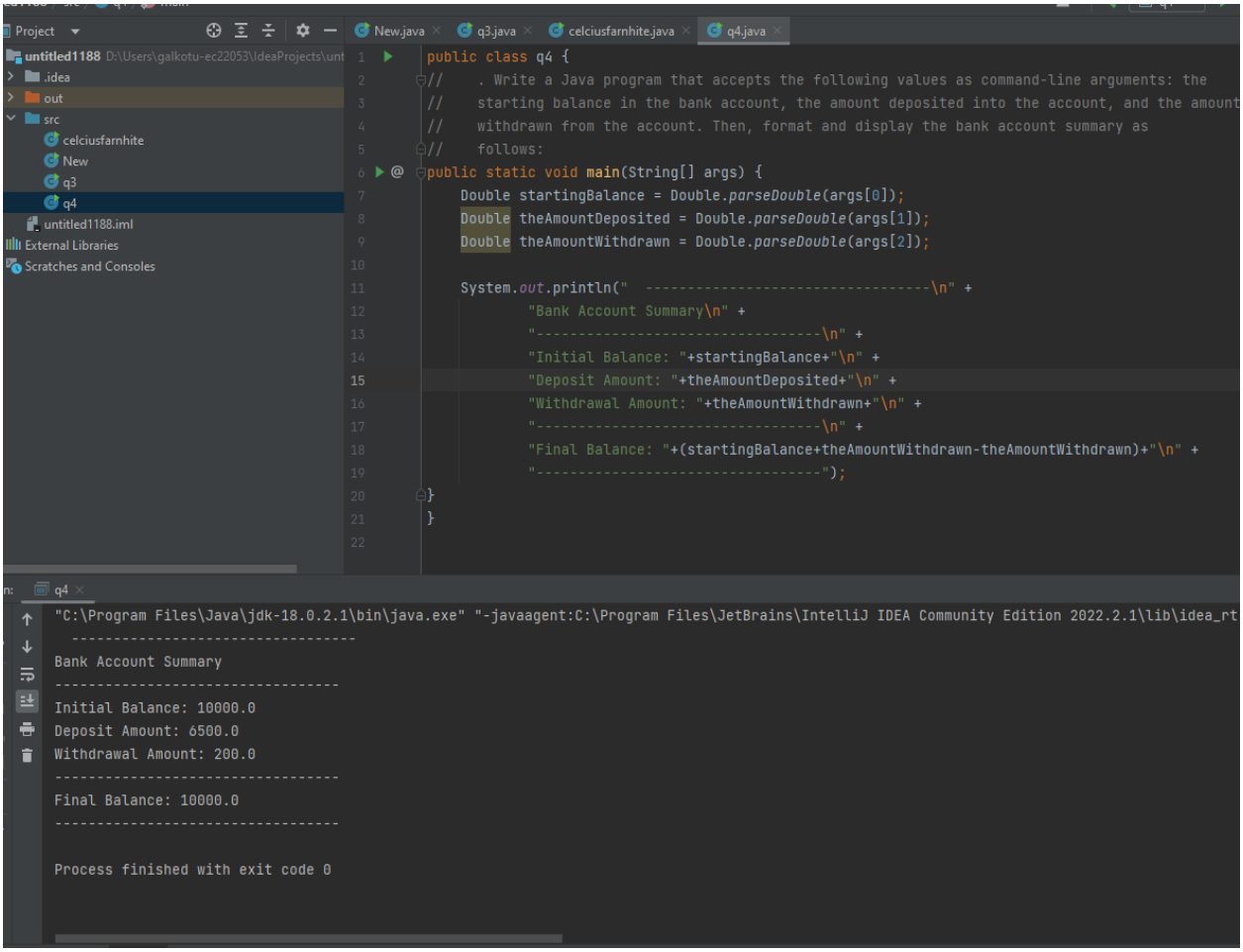


4.

```java
public class celciusfarnhite {
    public static void main(String[] args) {
        double celcius = Double.parseDouble(args[0]);
        double fahrenheit = (celcius *9/5.0) + 32;
        System.out.println("Temperature in Celsius: "+celcius+"°C");
        System.out.println("Converted Temperature in Fahrenheit: "+fahrenheit+"°F");
    }

}
```



5.




```
public class q4 {
public static void main(String[] args) {
    Double startingBalance = Double.parseDouble(args[0]);
    Double theAmountDeposited = Double.parseDouble(args[1]);
    Double theAmountWithdrawn = Double.parseDouble(args[2]);

    System.out.println("  ----------\n" +
            "Bank Account Summary\n" +
            "----------\n" +
            "Initial Balance: "+startingBalance+"\n" +
            "Deposit Amount: "+theAmountDeposited+"\n" +
            "Withdrawal Amount: "+theAmountWithdrawn+"\n" +
            "----------\n" +
            "Final Balance: "+(startingBalance+theAmountWithdrawn-
theAmountWithdrawn)+"\n" +
            "----------");
}
}
```