DIGITAL ASSINGMENT – 1 THEORY

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COURSE CODE	:	**CSC3001**
COURSE	:	**JAVA PROGRAMMING**
DATE	:	**4.03.2021**

1. From first name, middle initial, last name, social security number and create a password as in the following example. Example: **M**eera **S**. **N**air **1**23-**4**5-**6**789 will have password **m6s4n1**. [First Name must be your name]

Source Code:

```
import java.util.Scanner;

public class name_social_security_no {

String first_letter_capital( String name)
        {

        String firstLetter = name.substring(0, 1);
        String remainingLetters = name.substring(1, name.length());
         firstLetter = firstLetter.toUpperCase();
         name = firstLetter + remainingLetters;
        return name;

        }

public static void main(String[] args) {

        name_social_security_no obj = new name_social_security_no();
```

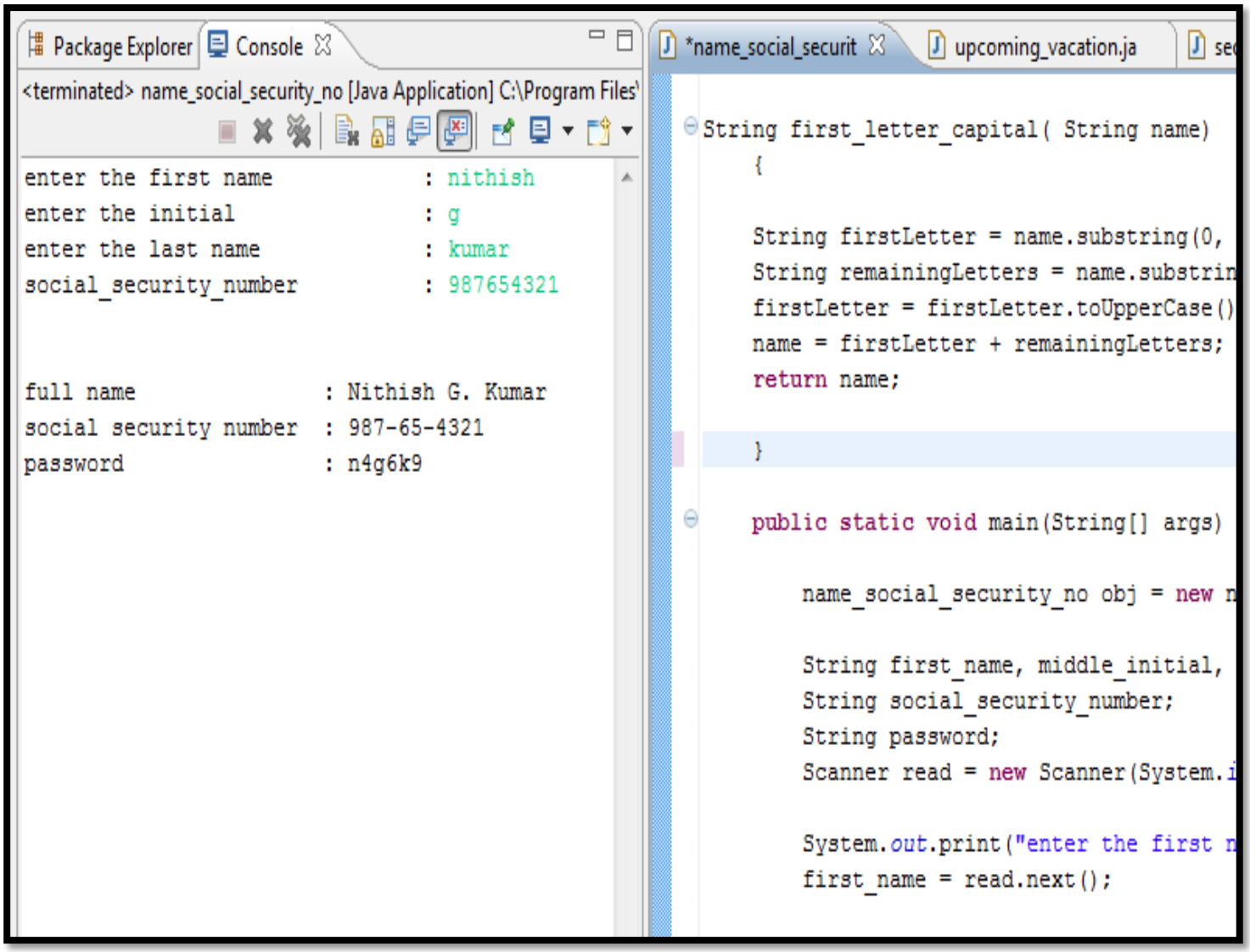
```
                String first_name, middle_initial, last_name;
                String social_security_number;
                String password;
                Scanner         read = new Scanner(System.in);

                System.out.print("enter the first name                : ");
                first_name = read.next();

                System.out.print("enter the initial            : ");
                middle_initial=read.next();

                System.out.print("enter the last name                : ");
                last_name = read.next();

                System.out.print("social_security_number                    : ");
                social_security_number = read.next();

password = first_name.substring(0, 1)+ social_security_number.substring(5,6);
password += middle_initial.substring(0,1) + social_security_number.subSequence(3,4);
password +=last_name.substring(0,1) + social_security_number.substring(0,1);

                first_name = obj.first_letter_capital(first_name);
                middle_initial = obj.first_letter_capital(middle_initial);
                last_name = obj.first_letter_capital(last_name);
social_security_number=social_security_number.replaceFirst("(\\d{3})(\\d{2})(\\d+)", "$1-$2-$3");

System.out.println("\n\n");

System.out.println("full name                : "+first_name+" "+middle_initial+". "+last_name);
System.out.println("social security number        : "+social_security_number);
System.out.print("password                : "+password);
        }
```

}

Output

Conditions satisfied:

Even user input given as lower case it converted into the correct format which is given in question and the password generated successfully from the given user Data.



2. Write a program to estimate the cost of an upcoming vacation. There are four types of expenses: Gas, food, boarding, and entertainments. Gas expense is computed on the basis of cost per mile and estimated miles of travel. Food, boarding, and entertainments are based on cost per day and estimated days for each one of them.

SOURCE CODE:

```
import java.util.Scanner;
public class upcoming_vacation {


    int destination(int miles)
    {
        Scanner obj = new Scanner(System.in);
        System.out.println("\t   choose the destination \n");
        System.out.println(" 1. Goa\t\t6. Darjeeling ");
        System.out.println(" 2. Manali\t7. Agra");
        System.out.println(" 3. Varanasi\t8. Coorg ");
        System.out.println(" 4. Jaipur\t9. Leh Ladakh");
        System.out.println(" 5. Shimla\t10. Munnar\n");
        System.out.print("Enter the Destination number : ");


        miles = obj.nextInt();


        switch ( miles )
        {
            case 1 :
                return 801;
            case 2 :
                return 2754;
            case 3 :
                return 1896;
            case 4 :
                return 2193;
            case 5:
                return 2564;
            case 6:
                return 2636 ;
            case 7:
                return 1980;
```

```
                case 8:
                        return 450;
                case 9:
                        return 3181;
                case 10:
                        return 504;
                default :
                        System.out.println("Model not found");
         break;
        }
        return 0;
}


public static void main(String[] args) {

        upcoming_vacation obj=new upcoming_vacation();
        final int vacation_days,members;
        final long food=400;
        final long boarding=350;
        final long entertainments=600;
        int miles_of_travel=0;
        final int cost_per_mile=50;
        long gas=0;



        miles_of_travel = obj.destination(miles_of_travel);
        Scanner read = new Scanner(System.in);
        System.out.print("Enter vacation days          : ");
        vacation_days=read.nextInt();

        System.out.print("Number of Passengers        : ");
        members = read.nextInt();
        gas = miles_of_travel*cost_per_mile*members;
```

```
                System.out.println("-----------------------------------------------");
                System.out.println("   cost per day for per head");
                System.out.println();
                System.out.println("Food          : Rs."+food);
                System.out.println("Boarding      : Rs."+boarding);
                System.out.println("Entertainments : Rs."+entertainments);
                System.out.println("cost per mile  : Rs."+cost_per_mile);
                System.out.println("gas           : Rs."+gas);
                System.out.println("gas = miles_of_travel*cost_per_mile");

                System.out.println("\n\t Estimate cost ");
                System.out.println();
                System.out.println("Expenses \t  cost for each Expenses");
                System.out.println();

System.out.println("Food            : "+ vacation_days+" * "+members+" * "+food+" =
Rs."+(vacation_days*food*members));
System.out.println("Boarding        : "+ vacation_days+" * " +members+" * "+boarding+" =
Rs."+vacation_days*boarding*members);
System.out.println("Entertainments        : "+vacation_days+" * "+members+" * "+entertainments+"
= Rs."+vacation_days*entertainments*members);

System.out.println("Gas             : "+miles_of_travel+" * "+members+" * "+cost_per_mile+" =
Rs."+ gas);

System.out.println("\n Total cost   : Rs."+(((vacation_days*food) + (vacation_days*boarding) +
(vacation_days*entertainments)+gas))*members );

        }

}
```

Output:

User input are: **choosing Destination, vacation days , no. Of passengers**

Package Explorer | Console

<terminated> upcoming_vacation [Java Application] C:\Program Files\Java\jc

```
          choose the destination

       1. Goa          6. Darjeeling
       2. Manali       7. Agra
       3. Varanasi     8. Coorg
       4. Jaipur       9. Leh Ladakh
       5. Shimla       10. Munnar

Enter the Destination number : 6
Enter vacation days          : 10
Number of Passengers         : 7
-----------------------------------------------
   cost per day for per head

Food           : Rs.400
Boarding       : Rs.350
Entertainments : Rs.600
cost per mile  : Rs.50
gas            : Rs.922600
gas = miles_of_travel*cost_per_mile

        Estimate cost

Expenses          cost for each Expenses

Food           : 10 * 7 * 400 = Rs.28000
Boarding       : 10 * 7 * 350 = Rs.24500
Entertainments : 10 * 7 * 600 = Rs.42000
Gas            : 2636 * 7 * 50 = Rs.922600

Total cost     : Rs.6552700
```

name_social_security | datatype_conversion_ | upcoming_vacation.ja

```
ublic static void main(String[] args) {

    upcoming_vacation obj=new upcoming_vacation();
    final int vacation_days,members;
    final long food=400;
    final long boarding=350;
    final long entertainments=600;
    int miles_of_travel=0;
    final int cost_per_mile=50;
    long gas=0;


    miles_of_travel = obj.destination(miles_of_travel);
    Scanner read = new Scanner(System.in);
    System.out.print("Enter vacation days           : ");
    vacation_days=read.nextInt();

    System.out.print("Number of Passengers         : ");
    members = read.nextInt();
    gas = miles_of_travel*cost_per_mile*members;


    System.out.println("-----------------------------------
    System.out.println("   cost per day for per head");
    System.out.println();
    System.out.println("Food           : Rs."+food);
    System.out.println("Boarding       : Rs."+boarding);
    System.out.println("Entertainments : Rs."+entertainments)
    System.out.println("cost per mile  : Rs."+cost_per_mile);
    System.out.println("gas            : Rs."+gas);
    System.out.println("gas = miles_of_travel*cost_per_mile")
```

3. Given the monthly salary of an employee, compute the bonus. The bonus is $1000 plus 2% of the amount above $7000 of the employee's annual salary. Assume that every employee has annual salary above $7000.

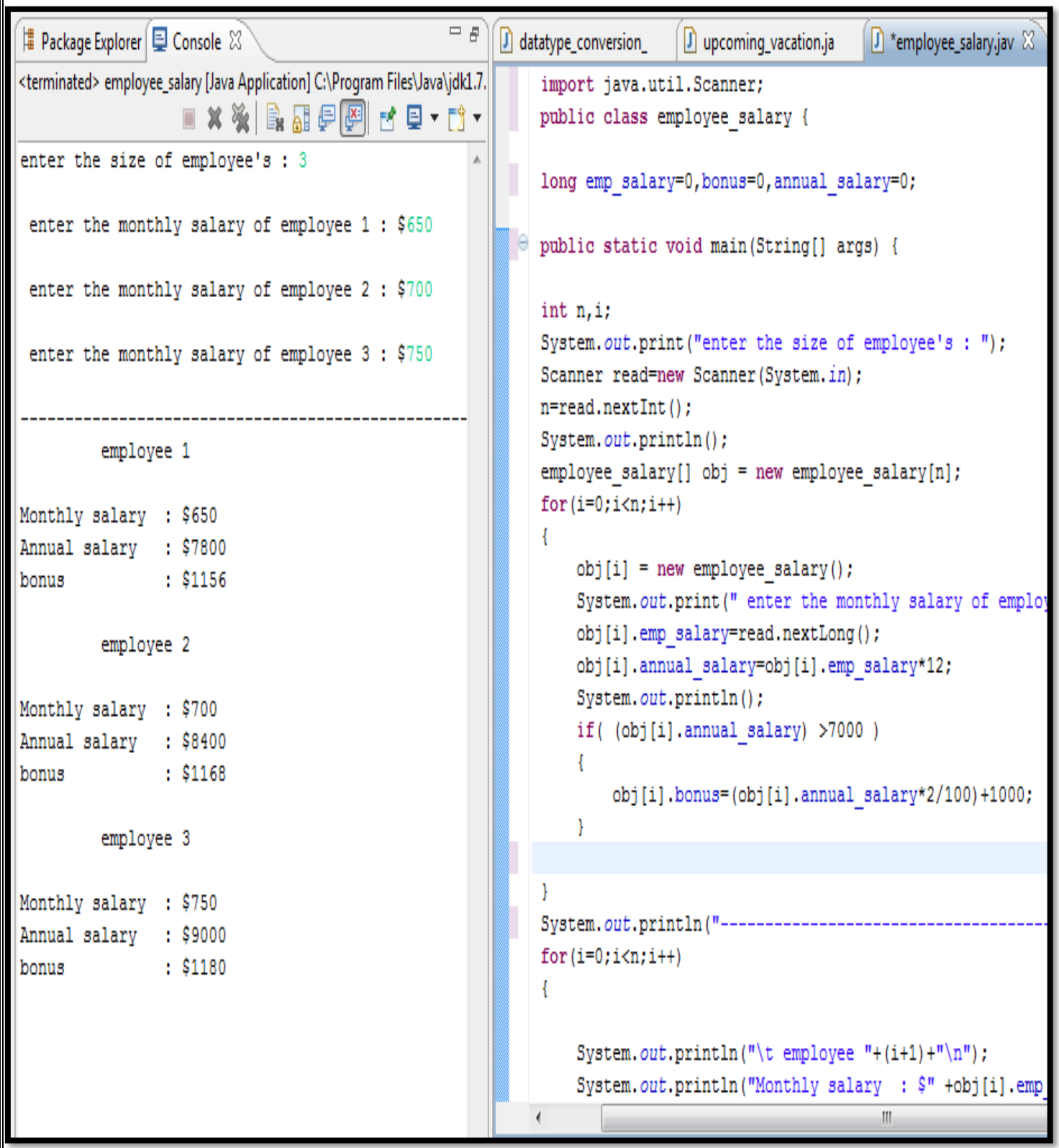
SOURCE CODE:

```
import java.util.Scanner;
public class employee_salary {

    long emp_salary=0,bonus=0,annual_salary=0;

    public static void main(String[] args) {

        int n,i;
        System.out.print("enter the size of employee's : ");
        Scanner read=new Scanner(System.in);
        n=read.nextInt();
        System.out.println();
        employee_salary[] obj = new employee_salary[n];

        for(i=0;i<n;i++)
        {
            obj[i] = new employee_salary();
            System.out.print(" enter the monthly salary of employee "+(i+1)+" : $");
            obj[i].emp_salary=read.nextLong();
            obj[i].annual_salary=obj[i].emp_salary*12;
            System.out.println();
            if( (obj[i].annual_salary) >7000 )
            {
                obj[i].bonus=(obj[i].annual_salary*2/100)+1000;
            }
```

```
            }
            System.out.println("-------------------------------------------------------");

            for(i=0;i<n;i++)
            {

                System.out.println("\t employee "+(i+1)+"\n");
                System.out.println("Monthly salary  : $" +obj[i].emp_salary);
                System.out.println("Annual salary   : $"+obj[i].annual_salary);
                if(obj[i].annual_salary>7000)
                {
                System.out.println("bonus           : $"+obj[i].bonus);
                }
                System.out.println();

            }


        }

}
```

Output next to this page (insufficient space)

Output:


Package Explorer
Console
<terminated> employee_salary [Java Application] C:\Program Files\Java\jdk1.7.
enter the size of employee's : 3
enter the monthly salary of employee 1 : $650
enter the monthly salary of employee 2 : $700
enter the monthly salary of employee 3 : $750
employee 1
Monthly salary : $650
Annual salary : $7800
bonus : $1156
employee 2
Monthly salary : $700
Annual salary : $8400
bonus : $1168
employee 3
Monthly salary : $750
Annual salary : $9000
bonus : $1180
datatype_conversion_
upcoming_vacation.ja
*employee_salary.jav
import java.util.Scanner;
public class employee_salary {
long emp_salary=0,bonus=0,annual_salary=0;
public static void main(String[] args) {
int n,i;
System.out.print("enter the size of employee's : ");
Scanner read=new Scanner(System.in);
n=read.nextInt();
System.out.println();
employee_salary[] obj = new employee_salary[n];
for(i=0;i<n;i++)
{
obj[i] = new employee_salary();
System.out.print(" enter the monthly salary of emplo
obj[i].emp_salary=read.nextLong();
obj[i].annual_salary=obj[i].emp_salary*12;
System.out.println();
if((obj[i].annual_salary) >7000)
{
obj[i].bonus=(obj[i].annual_salary*2/100)+1000;
}
}
System.out.println("----------
for(i=0;i<n;i++)
{
System.out.println("\t employee "+(i+1)+"\n");
System.out.println("Monthly salary : $" +obj[i].emp_

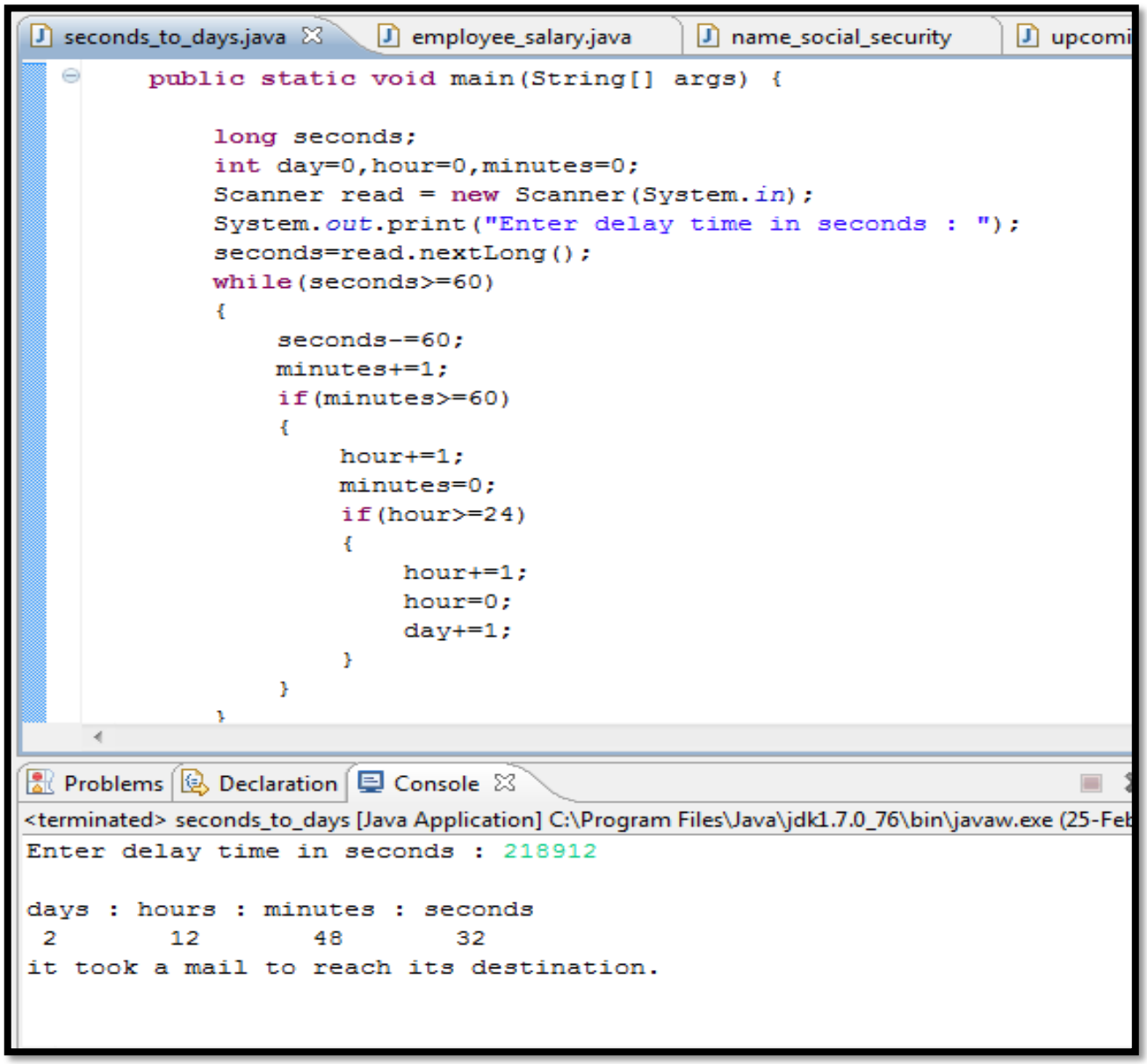
4. Given delay time in seconds, determine the number of days, hours, minutes, and seconds it took a mail to reach its destination.

Source code:

```
import java.util.Scanner;
public class seconds_to_days {

    public static void main(String[] args) {

        long seconds;
        int day=0,hour=0,minutes=0;
        Scanner read = new Scanner(System.in);

        System.out.print("Enter delay time in seconds : ");
        seconds=read.nextLong();

        while(seconds>=60)
        {
            seconds-=60;
            minutes+=1;
            if(minutes>=60)
            {
                hour+=1;
                minutes=0;
                if(hour>=24)
                {
                    hour+=1;
                    hour=0;
                    day+=1;
                }
            }
        }
```

```
System.out.println();

System.out.println("days :"+" hours :"+" minutes :"+" seconds ");

System.out.println(" "+day+"\t"+hour+" \t"+minutes+" \t "+seconds);
     }
}
```

Output:



----------Thank You! ----------