Velammal College of Engineering and Technology, Madurai-625009

(Autonomous)
Department of Computer Science and Engineering
Assignment II

Degree : B.E/CSE **Year/Semester/section : II/III/B**
Course Code-Title :21CS203/Object Oriented Programming **Batch: 2021-25**
Name of the Instructor:J.Shanthalakshmi Revathy
Announcement Date : 1.10.22 **Submission Date : 10.10.22**
Total Marks : 20 **Relevant COs : CO2-K3**

Questions

Create a TaxReturn class with fields that hold a taxpayer's Social Security number, last name, first name, street address, city, state, zip code, annual income, marital status, and tax liability. Include a constructor that requires arguments that provide values for all the fields other than the tax liability. The constructor calculates the tax liability based on annual income and the percentages in the following table.

	Marital status	
Income ($)	**Single**	**Married**
0–20,000	15%	14%
20,001–50,000	22%	20%
50,001 and over	30%	28%

In the TaxReturn class, also include a display method that displays all the TaxReturn data. Save the file as TaxReturn.java

Create an application that prompts a user for the data needed to create a TaxReturn. Continue to prompt the user for data as long as any of the following are true:

- The Social Security number is not in the correct format, with digits and dashes in the appropriate positions—for example, 999-99-9999.
- The zip code is not five digits.
- The marital status does not begin with one of the following: "S", "s", "M", or "m".
- The annual income is negative.

After all the input data is correct, create a TaxReturn object and then display its values. Save the file as PrepareTax.java

Instructions:

- Submit softcopy with neat formatting and commenting -On time submission required
- Specify at least five references.

Evaluation Rubrics:

Coding	**10**
Explanation	**4**
References	**2**
Timely submission	**2**
Total	**20**

Course Incharge **HoD-CSE**

ANSWER:

ALGORITHM:

Step 1: Start.

Step 2:create the class called Taxreturn with the Social Security number, last name, first name, street address, city, state, zip code, annual income, marital status, and tax liability.

Step 3: Check for the TaxLiability Using the constructore check for the a mrital status and check for the condition.

Step 4: Incude the display calss and display all the values.

Step 5: Create another package with main clas and immport the TaxReturn class.

Step 6:and create the object for TaxReturn calss

Step 7: Using while loop for promptly getting the input.

Step 8: Get all the details from the User and apply the Givn condtions usig

Step 9:if loop and check for securityt no shuuld be 999-99-999 format and zip code suuld be 5 digit and msritral status shold be ‘m’.’M’,’s’,’S’

Step 10:else print the enter the correct detail.

PROGRAM:

```
package assignment2;

public class TaxReturn {

    public String sec_no;

    public String l_name;

    public String f_name;

    public String street;

    public String city;

    public String state;

    public int zip_code;

    //double a_income;

    public String marital;
```

```
double TaxLiability(double a_income)
{
   double taxliability=0;
   double income=a_income;
   if("s".equalsIgnoreCase(marital))
   {
      if(income<=20000)
         taxliability=income*.15;
      else if(income<=50000)
         taxliability=income*.22;
      else
         taxliability=income*.30;
   }
   else if("m".equalsIgnoreCase(marital))
   {
      if(income<=20000)
         taxliability=income*.14;
      else if(income<=50000)
         taxliability=income*.20;
      else
         taxliability=income*.28;
   }
   return taxliability;
}
void display(double income,double tax)
{
   double a_income=income;
   double taxliability=tax;
```

```
        System.out.println("----------------------------------------------------------------");
        System.out.println("Social Security number-->:\t"+sec_no+
                "\n\nName-->:\t"+f_name+l_name+"\n\nStreet Address-->:\t"+street+
                "\nCity       -->:\t"+city+"\nState      -->:\t"+state+"\nZip Code    --
>:\t"+zip_code+
                "\nAnnual Income-->:\t"+a_income+"\nMarital Status-->:\t"+marital+
                "\n\nTax Liability-->:\t"+taxliability);
        System.out.println("----------------------------------------------------------------");
    }
}


package assignment2;
import assignment2.TaxReturn;
import java.util.*;
public class PrepareTax {
    public static void main(String[] args) {
        TaxReturn tr=new TaxReturn();
        Scanner sc=new Scanner(System.in);
        while(true)
        {
            System.out.println("**TAX CALCULATOR**");
            System.out.println("Enter Security Number-->");
            tr.sec_no=sc.next();
            //check
            System.out.println("Enter Last Name-->");
            tr.l_name=sc.next();
            System.out.println("Enter First Name-->");
            tr.f_name=sc.next();
```

```
System.out.println("Enter Street Name-->");
tr.street=sc.next();
System.out.println("Enter CIty Name-->");
tr.city=sc.next();
System.out.println("Enter State Name-->");
tr.state=sc.next();
System.out.println("Enter Zip Code-->");
tr.zip_code=sc.nextInt();
//check
System.out.println("Enter Income-->");
double a_income=sc.nextDouble();
System.out.println("Enter Marital Status-->");
tr.marital=sc.next();
//check
System.out.println("Enter Security Number-->");
char c[]=tr.sec_no.toCharArray();
String zip=Integer.toString(tr.zip_code);
if(((c[3]=='-')&&(c[6]=='-'))&&(zip.length()==5)&&
      (a_income>=0)&&((tr.marital.charAt(0)=='s')
      ||(tr.marital.charAt(0)=='S')||(tr.marital.charAt(0)=='m')
      ||(tr.marital.charAt(0)=='M')))
{
   double tax=tr.TaxLiability(a_income);
   tr.display(a_income,tax);
}
else
{
   System.out.println("Please Enter Valid Detail");
```

```
        }
      }
   }
}
```

OUTPUT:

```
**TAX CALCULATOR**
Enter Security Number-->123-45-678
Enter Last Name-->Sri
Enter First Name-->Lekha
Enter Street Name-->K.K. nagar
Enter CIty Name-->Madurai
Enter State Name-->Tamilnadu
Enter Zip Code-->625107
Enter Income-->20000
Enter Marital Status-->s
Enter Security Number-->
---------------------------------------------------------------
Social Security number-->:       123-45-678
Name-->:     LekhaSri
Street Address-->: K.K. nagar
City       -->:       Madurai
State      -->:       Tamilnadu
Zip Code   -->:     625107
Annual Income-->:20000.0
Marital Status-->:  s
Tax Liability-->:   3000.0
---------------------------------------------------------------
```

TAX CALCULATOR

Enter Security Number-->245-87-910

Enter Last Name-->Samlee

Enter First Name-->Ruth

Enter Street Name-->Valar Nagar

Enter City Name-->Kochin

Enter State Name-->Kerala

Enter Zip Code-->71267

Enter Income-->40000

Enter Marital Status-->m

Enter Security Number-->

Social Security number-->: 456-78-910

Name-->: RuthSamlee

Street Address-->: Valarnagar

City -->: Kochin

State -->: Kerala

Zip Code -->: 71234

Annual Income-->:40000.0

Marital Status-->: m

Tax Liability-->: 8000.0

TAX CALCULATOR

Enter Security Number-->123-45-665

Enter Last Name-->priya

Enter First Name-->Yoga

Enter Street Name-->Pudupatti

Enter City Name-->Hyderabad

Enter State Name-->AndhraPradesh

Enter Zip Code-->534761

Enter Income-->50000

Enter Marital Status-->s

Enter Security Number-->

Please Enter Valid Detail

TAX CALCULATOR

Enter Security Number-->

References:

- ***https://www.chegg.com/homework-help/questions-and-answers/create-taxreturn-class-fields-hold-taxpayer-s-social-security-number-last-name-first-name--q39290071***
- ***https://www.coursehero.com/tutors-problems/Java-Programming/29488061-Modify-theTaxReturnclass-with-fields-that-hold-a-taxpayers-Social-Sec/***
- ***https://www.studypool.com/discuss/14610405/write-a-program-on-tax-return***
- ***https://www.solusyon.live/na-updates-brainly.ph/question/29755745***
- ***https://books.google.co.in/books?id=nckIAAAAQBAJ&pg=PT361&lpg=PT361&dq***