**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 :21CS203/ Batch : 2021-25**

**Course-Title : Object Oriented Programming**

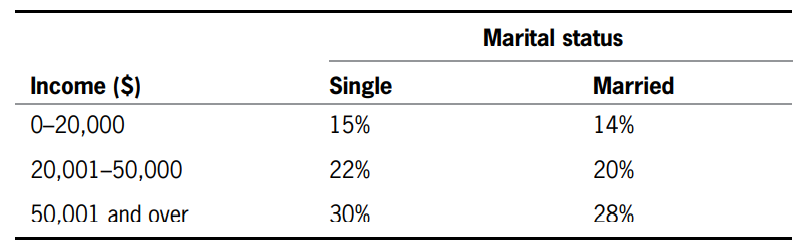
**Instructor : J. Shanthalakshmi Revathy**

**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.



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

**Evaluation Rubrics:**

|  |  |
| --- | --- |
| Coding |  |
| Explanation |  |
| References |  |
| Timely submission |  |
| **Total** |  |

**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 constructor check for the a marital status and**

**check for the condition.**

**Step:4 Include the display class and display all the values.**

**Step:5 Create another package with main class and import the TaxReturn class.**

**Step:6 Create the object for TaxReturn class.**

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

**Step:8 Get all the details from the User and apply the Given conditions using if loop and**

**check for security no should be 999-99-999 format and zip code should be 5 digit**

**and marital status should be ‘m’, ’M’, ’s’, ’S’.**

**Step:9 Else print the enter the correct detail.**

**Step:10 Stop.**

**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-->**

**Andy**

**Enter First Name-->**

**Sara**

**Enter Street Name-->**

**Georgeopool**

**Enter City Name-->**

**Erangle**

**Enter State Name-->**

**Newstate**

**Enter Zip Code-->**

**160178**

**Enter Income-->**

**30000**

**Enter Marital Status-->**

**s**

**Enter Security Number-->**

**----------------------------------------------------------------**

**Social Security number-->: 123-45-678**

**Name-->: Sara.Andy**

**Street Address-->: Georgeopool**

**City -->: Erangle**

**State -->: Newstate**

**Zip Code -->:160178**

**Annual Income-->: 30000.0**

**Marital Status-->: s**

**Tax Liability-->: 3000.0**

**----------------------------------------------------------------**

**\*\*TAX CALCULATOR\*\***

**Enter Security Number-->**

**456-78-910**

**Enter Last Name-->**

**eren**

**Enter First Name-->**

**yeager**

**Enter Street Name-->**

**Wall sina**

**Enter CIty Name-->**

**frost**

**Enter State Name-->**

**paradis**

**Enter Zip Code-->**

**178178**

**Enter Income-->**

**40000**

**Enter Marital Status-->**

**m**

**Enter Security Number-->**

**----------------------------------------------------------------**

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

**Name-->: eren.yeager**

**Street Address-->: Wall sina**

**City -->: frost**

**State -->: paradis**

**Zip Code -->: 178178**

**Annual Income-->: 40000.0**

**Marital Status-->: m**

**Tax Liability-->: 8000.0**

**----------------------------------------------------------------**

**\*\*TAX CALCULATOR\*\***

**Enter Security Number-->**

**1234567890**

**Enter Last Name-->**

**yeager**

**Enter First Name-->**

**zeke**

**Enter Street Name-->**

**1st exit**

**Enter CIty Name-->**

**liberia**

**Enter State Name-->**

**marley**

**Enter Zip Code-->**

**183178**

**Enter Income-->**

**50000**

**Enter Marital Status-->**

**s**

**Enter Security Number-->**

**Please Enter Valid Detail**

**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**