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| CGI |
| LAB REPORT |
| LAB-1 |
|  |
| **SWET SHEERSH** |
| **7/24/2023** |

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| --- |
| This report contains lab 1(1 to 15) codes and their output snapshots. |

|  |  |
| --- | --- |
| 1.4 | **package cgi\_first\_project;** |
|  |  |
|  | **public class Project\_1\_4 {** |
|  | **private String firstName;** |
|  | **private String lastName;** |
|  | **private char gender;** |
|  | **private int age;** |
|  | **private double weight;** |
|  | **public static void main(String[] args) {** |
|  | **Project\_1\_4 obj= new Project\_1\_4();** |
|  | **obj.firstName="Divya";** |
|  | **obj.lastName="Bharathi";** |
|  | **obj.gender='F';** |
|  | **obj.age=20;** |
|  | **obj.weight=85.55;** |
|  | ***System.out.println("Person Details:");*** |
|  | ***System.out.println("-----------------");*** |
|  | ***System.out.println("First Name: "+obj.firstName);*** |
|  | ***System.out.println("Last Name: "+obj.lastName);*** |
|  | ***System.out.println("Gender: "+obj.gender);*** |
|  | ***System.out.println("Age: "+obj.age);*** |
|  | ***System.out.println("Weight: "+obj.weight);*** |
|  |  |
|  |  |
|  | ***}*** |
|  |  |
|  | ***}*** |
|  |  |
| 5 | **package cgi\_assignment;** |
|  |  |
|  | **import java.util.Scanner;** |
|  |  |
|  | **public class Assignment\_1\_5 {** |
|  | **//main method** |
|  | **public static void main(String[] args) {** |
|  | **int num;** |
|  | **//taking input** |
|  | ***Scanner scanner=new Scanner(System.in);*** |
|  | ***System.out.println("Enter a Number: ");*** |
|  | ***num=scanner.nextInt();*** |
|  | ***if(num>0) {*** |
|  | ***System.out.println(num+ " is positive");*** |
|  | ***}else {*** |
|  | ***System.out.println(num+ " is negative");*** |
|  | ***}*** |
|  | ***}*** |
|  | ***}*** |
|  |  |
| 6 | **package cgi\_assignment.constr;** |
|  |  |
|  | **public class Person {** |
|  | **private String firstName;** |
|  | **private String lastName;** |
|  | **private char gender;** |
|  | **//getter setter** |
|  | **public String getFirstName() {** |
|  | **return firstName;** |
|  | **}** |
|  | **public void setFirstName(String firstName) {** |
|  | **this.firstName = firstName;** |
|  | **}** |
|  | **public String getLastName() {** |
|  | **return lastName;** |
|  | **}** |
|  | **public void setLastName(String lastName) {** |
|  | **this.lastName = lastName;** |
|  | **}** |
|  | **public char getGender() {** |
|  | **return gender;** |
|  | **}** |
|  | **public void setGender(char gender) {** |
|  | **this.gender = gender;** |
|  | **}** |
|  | **//default constructor** |
|  | **public Person() {** |
|  | **super();** |
|  | **// TODO Auto-generated constructor stub** |
|  | **}** |
|  | **//parameterize constructor** |
|  | **public Person(String firstName, String lastName, char gender) {** |
|  | **super();** |
|  | **this.firstName = firstName;** |
|  | **this.lastName = lastName;** |
|  | **this.gender = gender;** |
|  | **}** |
|  | **@Override** |
|  | **public String toString() {** |
|  | **return "Person [firstName=" + firstName + ", lastName=" + lastName + ", gender=" + gender + "]";** |
|  | **}** |
|  | **}** |
|  | PersonMain Class |
|  |  |
|  | **package cgi\_assignment.constr;** |
|  |  |
|  | **public class PersonMain {** |
|  |  |
|  | **public static void main(String[] args) {** |
|  | **Person obj=new Person("Divya","Bharathi",'F');** |
|  | ***System.out.println("Person Details:");*** |
|  | ***System.out.println("-----------------");*** |
|  | ***System.out.println("First Name: "+obj.getFirstName());*** |
|  | ***System.out.println("Last Name: "+obj.getLastName());*** |
|  | ***System.out.println("Gender: "+obj.getGender());*** |
|  |  |
|  | ***}*** |
|  |  |
|  | ***}*** |
|  |  |
| 7 | **package cgi\_assignment.assign\_1\_7;** |
|  |  |
|  | **public class Person {** |
|  | **private String firstName;** |
|  | **private String lastName;** |
|  | **private char gender;** |
|  | **private int phoneNumber;** |
|  | **//geeter setter** |
|  | **public String getFirstName() {** |
|  | **return firstName;** |
|  | **}** |
|  | **public void setFirstName(String firstName) {** |
|  | **this.firstName = firstName;** |
|  | **}** |
|  | **public String getLastName() {** |
|  | **return lastName;** |
|  | **}** |
|  | **public void setLastName(String lastName) {** |
|  | **this.lastName = lastName;** |
|  | **}** |
|  | **public char getGender() {** |
|  | **return gender;** |
|  | **}** |
|  | **public void setGender(char gender) {** |
|  | **this.gender = gender;** |
|  | **}** |
|  | **public int getPhoneNumber() {** |
|  | **return phoneNumber;** |
|  | **}** |
|  | **public void setPhoneNumber(int phoneNumber) {** |
|  | **this.phoneNumber = phoneNumber;** |
|  | **}** |
|  | **//default constructor** |
|  | **public Person() {** |
|  | **super();** |
|  | **// TODO Auto-generated constructor stub** |
|  | **}** |
|  | **//Parameterize constructor** |
|  | **public Person(String firstName, String lastName, char gender, int phoneNumber) {** |
|  | **super();** |
|  | **this.firstName = firstName;** |
|  | **this.lastName = lastName;** |
|  | **this.gender = gender;** |
|  | **this.phoneNumber = phoneNumber;** |
|  | **}** |
|  | **//tostring** |
|  | **@Override** |
|  | **public String toString() {** |
|  | **return "Person [firstName=" + firstName + ", lastName=" + lastName + ", gender=" + gender + ", phoneNumber="** |
|  | "=+ phoneNumber + "]";" |
|  | **}** |
|  |  |
|  | **}** |
|  | **package cgi\_assignment.assign\_1\_7;** |
|  |  |
|  |  |
|  |  |
|  | **public class PersonMain {** |
|  |  |
|  | **public static void main(String[] args) {** |
|  | **// TODO Auto-generated method stub** |
|  | **Person obj=new Person("Divya","Bharathi",'F',123456789);** |
|  | ***System.out.println("Person Details:");*** |
|  | ***System.out.println("-----------------");*** |
|  | ***System.out.println("First Name: "+obj.getFirstName());*** |
|  | ***System.out.println("Last Name: "+obj.getLastName());*** |
|  | ***System.out.println("Gender: "+obj.getGender());*** |
|  | ***System.out.println("Phone Number: "+obj.getPhoneNumber());*** |
|  |  |
|  | ***}*** |
|  |  |
|  | ***}*** |
|  |  |
| 8 | **package cgi\_assignment.assign\_1\_7;** |
|  |  |
|  | **public enum Gen {** |
|  | ***M,*** |
|  | ***F;*** |
|  | ***}*** |
|  | **package cgi\_assignment.assign\_1\_7;** |
|  |  |
|  | **public class Person {** |
|  | **private String firstName;** |
|  | **private String lastName;** |
|  | **private char gender;** |
|  | **private int phoneNumber;** |
|  | **//geeter setter** |
|  | **public String getFirstName() {** |
|  | **return firstName;** |
|  | **}** |
|  | **public void setFirstName(String firstName) {** |
|  | **this.firstName = firstName;** |
|  | **}** |
|  | **public String getLastName() {** |
|  | **return lastName;** |
|  | **}** |
|  | **public void setLastName(String lastName) {** |
|  | **this.lastName = lastName;** |
|  | **}** |
|  | **public char getGender() {** |
|  | **return gender;** |
|  | **}** |
|  | **public void setGender(char gender) {** |
|  | **this.gender = gender;** |
|  | **}** |
|  | **public int getPhoneNumber() {** |
|  | **return phoneNumber;** |
|  | **}** |
|  | **public void setPhoneNumber(int phoneNumber) {** |
|  | **this.phoneNumber = phoneNumber;** |
|  | **}** |
|  | **//default constructor** |
|  | **public Person() {** |
|  | **super();** |
|  | **// TODO Auto-generated constructor stub** |
|  | **}** |
|  | **//Parameterize constructor** |
|  | **public Person(String firstName, String lastName, char gender, int phoneNumber) {** |
|  | **super();** |
|  | **this.firstName = firstName;** |
|  | **this.lastName = lastName;** |
|  | **this.gender = gender;** |
|  | **this.phoneNumber = phoneNumber;** |
|  | **}** |
|  | **//tostring** |
|  | **@Override** |
|  | **public String toString() {** |
|  | **return "Person [firstName=" + firstName + ", lastName=" + lastName + ", gender=" + gender + ", phoneNumber="** |
|  | "=+ phoneNumber + "]";" |
|  | **}** |
|  |  |
|  | **}** |
|  | **package cgi\_assignment.assign\_1\_7;** |
|  |  |
|  | **import java.util.Scanner;** |
|  |  |
|  | **public class PersonMain\_1\_8 {** |
|  |  |
|  | **public static void main(String[] args) {** |
|  | **String fName,lName;** |
|  | **char gen;** |
|  | **int pn;** |
|  | ***Scanner scanner=new Scanner(System.in);*** |
|  | ***System.out.println("Enter First Name: ");*** |
|  | ***fName=scanner.nextLine();*** |
|  | ***System.out.println("Enter Last Name: ");*** |
|  | ***lName=scanner.nextLine();*** |
|  | ***do {*** |
|  | ***System.out.println("Enter Gender Either M OR F:");*** |
|  | ***gen=scanner.next().charAt(0);*** |
|  | ***if(!((gen==Gen.M.toString().charAt(0)) || (gen==Gen.F.toString().charAt(0)))) {*** |
|  | ***System.out.println("Invalid Input!! Try Again");*** |
|  | ***}*** |
|  | ***}while(!((gen==Gen.M.toString().charAt(0)) || (gen==Gen.F.toString().charAt(0))));*** |
|  | ***System.out.println("Enter Pnone Number: ");*** |
|  | ***pn=scanner.nextInt();*** |
|  | ***Person obj=new Person(fName,lName,gen,pn);*** |
|  | ***System.out.println("Person Details:");*** |
|  | ***System.out.println("-----------------");*** |
|  | ***System.out.println("First Name: "+obj.getFirstName());*** |
|  | ***System.out.println("Last Name: "+obj.getLastName());*** |
|  | ***System.out.println("Gender: "+obj.getGender());*** |
|  | ***System.out.println("Phone Number: "+obj.getPhoneNumber());*** |
|  |  |
|  | ***}*** |
|  |  |
|  | ***}*** |
|  |  |
| 9 | **package assignment\_9;** |
|  |  |
|  | **public class StringOp {** |
|  | **private String str;** |
|  |  |
|  | **public String getStr() {** |
|  | **return str;** |
|  | **}** |
|  |  |
|  | **public void setStr(String str) {** |
|  | **this.str = str;** |
|  | **}** |
|  |  |
|  | **public StringOp() {** |
|  | **super();** |
|  | **// TODO Auto-generated constructor stub** |
|  | **}** |
|  |  |
|  | **public StringOp(String str) {** |
|  | **super();** |
|  | **this.str = str;** |
|  | **}** |
|  |  |
|  | **@Override** |
|  | **public String toString() {** |
|  | **return "Updated String is: "+str;** |
|  | **}** |
|  | **}** |
|  |  |
|  | **package assignment\_9;** |
|  |  |
|  | **public class StringOpMethod {** |
|  | **StringOp op=new StringOp();** |
|  | **public StringOp addItself(String str) {** |
|  | **op.setStr(str.concat(str));** |
|  | **return op;** |
|  | **}** |
|  | **public StringOp oddpos(String str) {** |
|  | **StringBuilder builder=new StringBuilder(str);** |
|  | **for(int i=0;i<str.length();i++) {** |
|  | **if((i+1)%2!=0) {** |
|  | **builder.setCharAt(i, '#');** |
|  | **}** |
|  | **}** |
|  | **op.setStr(builder.toString());** |
|  | **return op;** |
|  | **}** |
|  | **public StringOp removedup(String str) {** |
|  | **String str1="";** |
|  | **for(int i=0;i<str.length();i++) {** |
|  | **if(str1.indexOf(str.charAt(i))<0) {** |
|  | **str1+=str.charAt(i);** |
|  | **}** |
|  | **}** |
|  | **op.setStr(str1);** |
|  | **return op;** |
|  | **}** |
|  | **public StringOp oddUpper(String str) {** |
|  | **StringBuilder builder=new StringBuilder(str);** |
|  | **for(int i=0;i<str.length();i++) {** |
|  | **if((i+1)%2!=0) {** |
|  | **String str1="";** |
|  | **str1+=str.charAt(i);** |
|  | **str1=str1.toUpperCase();** |
|  | **builder.setCharAt(i, str1.charAt(0));** |
|  | **}** |
|  | **}** |
|  | **op.setStr(builder.toString());** |
|  | **return op;** |
|  | **}** |
|  | **}** |
|  |  |
|  | **package assignment\_9;** |
|  |  |
|  | **import java.util.Scanner;** |
|  |  |
|  | **public class StringOpMain {** |
|  |  |
|  | **public static void main(String[] args) {** |
|  | **// TODO Auto-generated method stub** |
|  | **StringOp str=new StringOp();** |
|  | **StringOpMethod method=new StringOpMethod();** |
|  | ***Scanner scanner=new Scanner(System.in);*** |
|  | ***System.out.println("Enter String: ");*** |
|  | ***str.setStr(scanner.nextLine());*** |
|  | ***System.out.println("Enter Your Choice as per following operation: ");*** |
|  | ***System.out.println("Enter 1 : Add the String to itself");*** |
|  | ***System.out.println("Enter 2 : Replace odd positions with #\r\n"+ "");*** |
|  | ***System.out.println("Enter 3 : Remove duplicate characters in the String");*** |
|  | ***System.out.println("Enter 4 : Change odd characters to upper case");*** |
|  | ***System.out.println("Enter 5 :Exit");*** |
|  | ***int choice;*** |
|  | ***choice=scanner.nextInt();*** |
|  | ***switch(choice) {*** |
|  | ***case 1:*** |
|  | ***System.out.println(method.addItself(str.getStr()));*** |
|  | ***break;*** |
|  | ***case 2:*** |
|  | ***System.out.println(method.oddpos(str.getStr()));*** |
|  | ***break;*** |
|  | ***case 3:*** |
|  | ***System.out.println(method.removedup(str.getStr()));*** |
|  | ***break;*** |
|  | ***case 4:*** |
|  | ***System.out.println(method.oddUpper(str.getStr()));*** |
|  | ***break;*** |
|  | ***case 5:*** |
|  | ***System.out.println("Thank You...");*** |
|  | ***break;*** |
|  | ***default:*** |
|  | ***System.out.println("Thank You...");*** |
|  | ***}*** |
|  | ***}*** |
|  |  |
|  | ***}*** |
|  |  |
| 10 | **package assignment;** |
|  |  |
|  | **import java.util.ArrayList;** |
|  | **import java.util.Collection;** |
|  | **import java.util.Collections;** |
|  |  |
|  | **public class Assig\_10 {** |
|  | **//method** |
|  | **public static boolean checkpos(String str) {** |
|  | **str=str.toUpperCase();** |
|  | **ArrayList<Integer> list=new ArrayList<Integer>();** |
|  | **for(int i=0;i<str.length();i++) {** |
|  | **Character ch=new Character(str.charAt(i));** |
|  | **if(list.size()==0) {** |
|  | **list.add(ch.hashCode());** |
|  | **}** |
|  | ***else if(Collections.max(list)<ch.hashCode()) {*** |
|  | ***list.add(ch.hashCode());*** |
|  | ***}*** |
|  | ***else {*** |
|  | ***return false;*** |
|  | ***}*** |
|  | ***}*** |
|  | ***return true;*** |
|  | ***}*** |
|  | ***public static void main(String[] args) {*** |
|  | ***String str="AbcDeFghijklmnopqrstuvwxyzaas";*** |
|  | ***System.out.println(checkpos(str));*** |
|  | ***}*** |
|  | ***}*** |
|  |  |
| 11 | **package assignment;** |
|  |  |
|  | **import java.time.LocalDate;** |
|  | **import java.time.LocalDateTime;** |
|  | **import java.time.Month;** |
|  |  |
|  | **public class Assig\_11 {** |
|  |  |
|  | **public static void main(String[] args) {** |
|  | **// TODO Auto-generated method stub** |
|  | ***LocalDate date=LocalDate.of(1947,Month.AUGUST, 15);*** |
|  | ***LocalDate currdate=LocalDate.now();*** |
|  | ***LocalDate d1= currdate.minusDays(date.getDayOfMonth());*** |
|  | ***LocalDate d2= d1.minusMonths(date.getMonthValue());*** |
|  | ***LocalDate d3= d2.minusYears(date.getYear());*** |
|  | ***System.out.println("Duration in years, months and days : "+d3);*** |
|  | ***}*** |
|  |  |
|  | ***}*** |
|  |  |
| 12 | **package assignment;** |
|  |  |
|  | **import java.time.LocalDate;** |
|  | **import java.time.Month;** |
|  |  |
|  | **public class Assig\_12 {** |
|  |  |
|  | **public static void main(String[] args) {** |
|  | **// TODO Auto-generated method stub** |
|  | ***LocalDate date=LocalDate.of(1947,Month.AUGUST, 15);*** |
|  | ***LocalDate currdate=LocalDate.of(2022,Month.APRIL,22);*** |
|  | ***LocalDate d1= currdate.minusDays(date.getDayOfMonth());*** |
|  | ***LocalDate d2= d1.minusMonths(date.getMonthValue());*** |
|  | ***LocalDate d3= d2.minusYears(date.getYear());*** |
|  | ***System.out.println("Duration in years, months and days : "+d3);*** |
|  | ***}*** |
|  |  |
|  | ***}*** |
|  |  |
| 13 | **package assignment;** |
|  |  |
|  | **import java.time.LocalDate;** |
|  | **import java.time.format.DateTimeFormatter;** |
|  | **import java.util.Scanner;** |
|  |  |
|  | **public class Assig\_13 {** |
|  | **public static LocalDate warrenty(LocalDate date,int year,int month) {** |
|  | **date=date.plusMonths(month);** |
|  | **date=date.plusYears(year);** |
|  | **return date;** |
|  | **}** |
|  |  |
|  | **public static void main(String[] args) {** |
|  | **// TODO Auto-generated method stub** |
|  | ***Scanner scanner=new Scanner(System.in);*** |
|  | ***String d;*** |
|  | ***System.out.println("Enter your product purchase date in (dd-MM-yyyy) format: ");*** |
|  | ***d=scanner.nextLine();*** |
|  | ***DateTimeFormatter formatter=DateTimeFormatter.ofPattern("dd-MM-yyyy");*** |
|  | ***LocalDate date=LocalDate.parse(d,formatter);*** |
|  | ***System.out.println("Enter warrantee period in month and year");*** |
|  | ***System.out.println("year: ");*** |
|  | ***int y=scanner.nextInt();*** |
|  | ***System.out.println("month: ");*** |
|  | ***int mon=scanner.nextInt();*** |
|  | ***System.out.println("Expiry date of warrenty: "+ warrenty(date,y,mon));*** |
|  |  |
|  | ***}*** |
|  |  |
|  | ***}*** |
|  |  |
| 14 | **package assignment;** |
|  |  |
|  | **import java.time.ZoneId;** |
|  | **import java.time.ZonedDateTime;** |
|  |  |
|  | **public class Assig\_14 {** |
|  | **//method** |
|  | **public void timeByZone(String str) {** |
|  | ***ZoneId zone=ZoneId.of(str);*** |
|  | ***ZonedDateTime time=ZonedDateTime.now(zone);*** |
|  | ***System.out.println("Current time at Zone "+str+" is : "+time);*** |
|  | ***}*** |
|  | ***public static void main(String[] args) {*** |
|  | ***// TODO Auto-generated method stub*** |
|  | ***Assig\_14 obj=new Assig\_14();*** |
|  | ***obj.timeByZone("Europe/London");*** |
|  | ***}*** |
|  |  |
|  | ***}*** |
|  |  |
| 15 | **package assing\_15;** |
|  |  |
|  | **public class Person {** |
|  | **private String firstName;** |
|  | **private String lastName;** |
|  | **private char gender;** |
|  | **//getter setter** |
|  | **public String getFirstName() {** |
|  | **return firstName;** |
|  | **}** |
|  | **public void setFirstName(String firstName) {** |
|  | **this.firstName = firstName;** |
|  | **}** |
|  | **public String getLastName() {** |
|  | **return lastName;** |
|  | **}** |
|  | **public void setLastName(String lastName) {** |
|  | **this.lastName = lastName;** |
|  | **}** |
|  | **public char getGender() {** |
|  | **return gender;** |
|  | **}** |
|  | **public void setGender(char gender) {** |
|  | **this.gender = gender;** |
|  | **}** |
|  | **//default constructor** |
|  | **public Person() {** |
|  | **super();** |
|  | **// TODO Auto-generated constructor stub** |
|  | **}** |
|  | **//parameterize constructor** |
|  | **public Person(String firstName, String lastName, char gender) {** |
|  | **super();** |
|  | **this.firstName = firstName;** |
|  | **this.lastName = lastName;** |
|  | **this.gender = gender;** |
|  | **}** |
|  | **@Override** |
|  | **public String toString() {** |
|  | **return "Person [firstName=" + firstName + ", lastName=" + lastName + ", gender=" + gender + "]";** |
|  | **}** |
|  | **}** |
|  |  |
|  |  |
|  | **package assing\_15;** |
|  |  |
|  | **import java.time.LocalDate;** |
|  | **import java.time.format.DateTimeFormatter;** |
|  | **import java.util.Scanner;** |
|  |  |
|  | **public class PersonMain {** |
|  | **//method** |
|  | **public void calculateAge(LocalDate date) {** |
|  | ***LocalDate d1=LocalDate.now();*** |
|  | ***d1=d1.minusDays(date.getDayOfMonth());*** |
|  | ***d1=d1.minusMonths(date.getMonthValue());*** |
|  | ***d1=d1.minusYears(date.getYear());*** |
|  | ***System.out.println("You are "+d1.getYear()+*** |
|  | ***" year "+d1.getMonthValue()+ " month "+*** |
|  | ***d1.getDayOfMonth()+" days old" );*** |
|  | ***}*** |
|  | ***public String getFullName(String firstName, String lastName) {*** |
|  | ***return firstName.concat(" ").concat(lastName);*** |
|  | ***}*** |
|  | ***public static void main(String[] args) {*** |
|  | ***Person obj=new Person("Divya","Bharathi",'F');*** |
|  | ***System.out.println("Person Details:");*** |
|  | ***System.out.println("-----------------");*** |
|  | ***System.out.println("First Name: "+obj.getFirstName());*** |
|  | ***System.out.println("Last Name: "+obj.getLastName());*** |
|  | ***System.out.println("Gender: "+obj.getGender());*** |
|  | ***//Age calculate*** |
|  | ***Scanner scanner=new Scanner(System.in);*** |
|  | ***String d;*** |
|  | ***System.out.println("Enter your D.O.B in (dd-MM-yyyy) format: ");*** |
|  | ***d=scanner.nextLine();*** |
|  | ***DateTimeFormatter formatter=DateTimeFormatter.ofPattern("dd-MM-yyyy");*** |
|  | ***LocalDate date=LocalDate.parse(d,formatter);*** |
|  | ***PersonMain obj1=new PersonMain();*** |
|  | ***obj1.calculateAge(date);*** |
|  | ***//Full Name*** |
|  | ***System.out.println("Full Name: "+obj1.getFullName(obj.getFirstName(), obj.getLastName()));*** |
|  | ***}*** |
|  |  |
|  | ***}*** |

Thank You…