

## Lab PHOGHam - 6

Stydent, java package CIE; import java will. Scanner; public class Student & public String name; public String USM; public int sem; public void display () ? Scanney 3 = new Scanney ( system.in); System. out. printly (" Name !-"); name = s. next (); System. Dut. print ("USN:-"); DSN = S. NOXTO; system. out. print ("semester:"); Sem= SeinextInt();

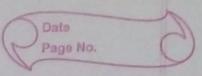
Jutemals. java

package CIE;

import java. util. Scanner;

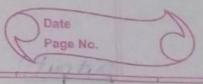
public class Internals extends students

public double ciem[];

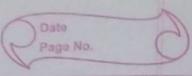


public void display () { ciem = new double [5]; Scanney t = new Scanney (System.in); System. out. printin ("CIE marks for 5 subjects:"); for (inti=0; i<5; i++) = ciem[i]=t.nextDouble (); Externals. java package SEE; imposet java. util. \*; IMPORT CIEX; public class Externals externals CIE. Student & public dauble semm[] public void display () { semm = new double [5]; Scanner's = new Scanner (Systemin); System. out. printin ("SEE moules jon 5 & subjects (out of 100):"); for (inti=0', i<5', i+t) semm[i] = s. next Double(); Main . Java manual litu . our troop Import CIE. \*;

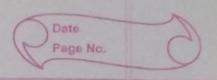
import SEE. \*;



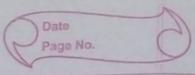
import java util . scanner; public class main & public static void main (String args [7) } in thi Scanney s = new Scanney (system.in); System. out print (" anter the number of students: "); n=S. next Int (); CIE. Student stl7 = new CIE. Student[n] CIE. Internals in[] = new CIE. Internals[n]; SEE. EXTERNAL ex[] = New SEE. EXTERNALS[N]; for (inti=0; i<n; i+t){ St[i] = hew CIE. Student (); in [i] - new CIE. Internals(); ex[i] = new SEE. Externals (); Stlil. display(); in [i] displayer; ex[i]. display(); System-out. println ("Total marks of student"+ stlil. name +" in 5 subjects are; "); for (int j=0; j <5; j++)} System.out. println (insi]. Ciem [i] + (efi]. semmlil



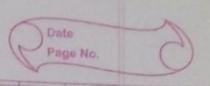
	( Page No. ( )
	adput!
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	THE THE PARTY OF T
-	USN: 16m 65 118
,	Semester, 9
	CIE Marks foor 5 subjects (out of 50):
(Citya)	145 The state of t
	47 MARTHANISTA
1000	1 + 39 0 910 MAN - F1 to the to 312
THE	49 1700 March ( 313
Tw7.44	44 - 19 - Che down tra 1932
	SEE marks jor 5 subjects (out of 160)!
	78
-	98 1000000000000000000000000000000000000
-	87 1220 22 20 20 20 20 20 20 20 20 20 20 20
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	. 89 Milliogus Caani
	Total marks of student raman in 5 subjects
+ bucher	are; and the state of the metal
	84.0 2 4 4 2 1 1 1 4 2 AMCY. [ ] 42
	96.0 1/4/12/10=(buil rate
Whenes . I	82.57 mis. [17 di) withing humanty
4	95.5
	88.5



F MARRADRA dal write a program to demonstrate generics with multiple object parameters. 11 A simple Generic type with two type A parameters: Tandy class Two hen < T, V>g. Il Pass constructor a reference to and object I of type T and are object of type V. Two Gen (TO1, VO2) ? Ob1 = 01; " () Ldates 0 62 = 02; UShow types of Tand V. void showtypes () { System.out. printin(" Type of T is" + obt. get (less U. get Name ()); System. out. println ("Type of V is" + ob2. getclass(). get Name (1); 3 () Edotsp. T L'the arenter



V getob2 () § notuein obz; 1) Demonstrate Two Gen. class simplien & public static void main (String args [])? Twochen < Integer, string > tookin = new Two hen < 1 ntegen, String > (88) " (reverice"); 11 Show the Appels to a contraction of the tgrobj. show Types (); 11 Obtain and show values. int v = tgobj. getob10; System. out printly ("value: "+ v); String star = tgobj. getob2(); System. out. println (" value!" + Sta); output tugting Type of T is java, long, Integer Type of v is java lang string value: 88 Value : generics



## Lab Program 8

exceptions in inheritance tree. Create a base class called Father and derived class called Son' which extends the base class. In father class, implement a constructor which takes the age and throws the exception whoughge I when the input age (I). In Son class, implement a constructor that dass cases both father and son's age and throws an exception if son's age is > = father's age.

class Whoughge extends Exception &

private String detail;

whoughge (Strings) &

detail = S;

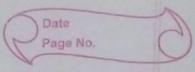
public String to String () ?

neturn ("Invalid age exception:" + detail

2 3

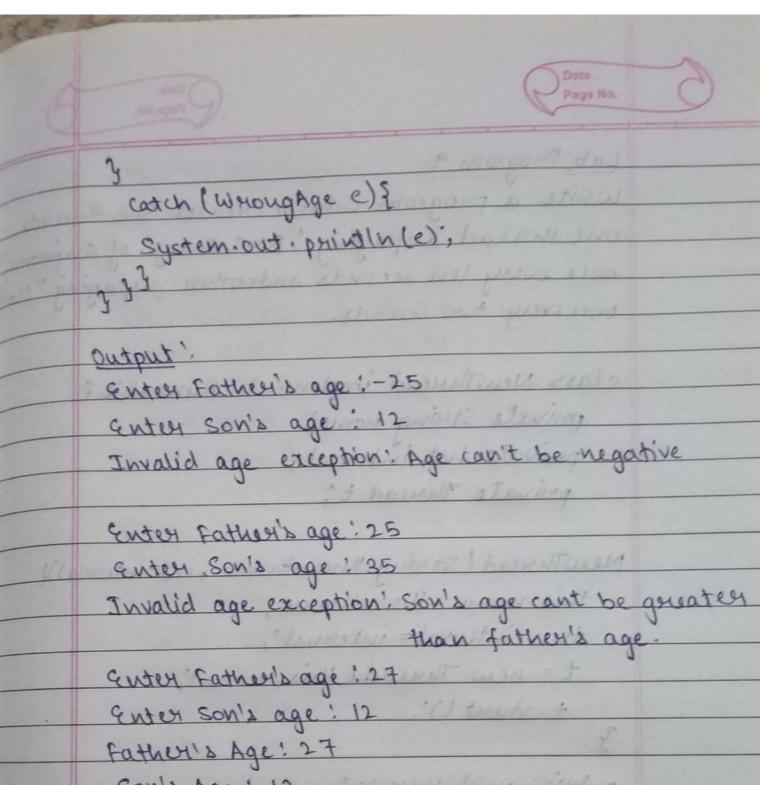
class jather ?

father lint on therois wrong Age ?

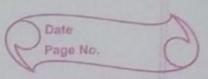


if (age < 0) throw new wrong Age ("Age can't be negative"); class son extends fathers intages; son (int tage, int sage) therows wrong Age & super (tage); ages = sage; if (ages>=age) therew new whong Age ("Son's age can't be greated than father's age"): class expmains public static void main (String angs[]) ? Scanner s = new Scanner (system.in); System. out. privat ("Enter Father's age"."); int m = s. next Int (); System.out. print (" enter son's age! ") int n = s next Int (); Frest son ob = new son(m, n);

System. out. paintly ("Father's Age; " + 06. age); system. out printly (" son's Age!" + ob . ags);



Son's Age: 12



Lab Program 9 write a program which creates two threads, one thread displaying "BMS college of anginoning" once every ten seconds and nother displaying "CSE" once every two seconds. class NewThread implements Runnable & private String name;

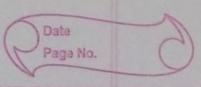
perivate intinterval; private Thread t;

HewTheread (String thereadname, int interval) this name = threadrame; this interval = interval; t = new Thread (this, name);

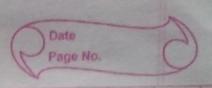
public void sun ()?

for (inti=5', i>0', i--) }

System. out. privath ("Thread -- 4 + this name), Thread. sleep (this interval);



catch (Intersupted Exception e) } System.out. printly (name + "Interrupted"). class Multithousad ? public static void main (String augs []) {
new New Thread ("BMS college of Engineering", 10000); new New Thread ("CSE", 2000); ! tugtuo Thread -- BMS college of Engineering Thread -- CSE Thread -- CSE Thread -- CSE Thouad -- CSE Thread - - CSE Thread -- BMS college of Engineering Thread - - BMS college of Engineering Thread -- BMS college of Engineering Thread -- BMS college of Engineering



## Lab PHOGRAM TO

white a program that creates a user interface to perform integer divisions. The user enters two numbers in the fext fields, NVMI and NUM2. The division of NUM1 and Nam2 1x displayed in the result field when the divide button is dicked of Num1 and Num2 is displayed in the result field when the divide button, the program would throw an arithmetic exception display the exception in a message dialog box.

import java-aust. \*;

import java-aust. event. ;

public class lablo extends Frame implements

Action listener &

Textfield numl, num2; 20 - house

Button ni / speller 2MA - bornedt

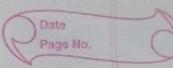
Tablo () for to apple and borrell

num1 = new Tentfield ();

num1. setBounds (50,50, 200, 25);

num2 = new Tentfield ();

NUM2. set Bounds (50, 100, 200 , 25)



1 = new label (); N + ping tug woth 1. set Bounds (50, 150, 300, 50); n = new. Button ("Divide"); n. set Bounds (50,200,100,50); add(n); add (num1); add (num2); add(1) setsize (800,800), set layout (null); setvisible (true); Public void actionPerformed (ActionEvent e) ? try? String n1 = num1. getText (); String n2 = num2. getTent (); 1. setText ("Quotient;" + (Integer, parseInt(ns)) suteger paseInt (n2)); I catch (NumberFormat Exception Ze) { 1. setText ("cannot divide non-Integer values); 3 coutch (Arithmetic Exception Ze) ? 1. retText (" cannot divide"); 3 catch (Exception ex) {

