1. Develop a Java program that prints all real solutions to the quadratic equation ax2+bx+c=0. Read in a, b, c and use the quadratic formula. If the discriminate b2-4ac is negative, display a message stating that there are no real solutions.

Meek 3 (lab program) Algoritm: Triput a, b, c Calculate discriminate If deo Real roots Print no and nz Print no and nz	- 1		
Input a, b, c Calculate discriminate If do Real roots Calculation of Fill and Fill If do Real roots Real and unique Print Fill and Fill Print Fill and Fill Program: import java util Scanner class Oop! Scanner & recu Scanner (System in): double a, b, c, 91, 12, d; Sustem out printle ("Enter the value of a b, c"): b: & c next Double (); c= & c next Double (); c= & c next Double (); d= (b*b) - (4 * a * c); If (d(0) System out printle ("No real roots for the qiven quarkatic equation"); else if (d) = 0) Shi- (h+ Math. (a a + (d)))/(2*a);		Week 3 (Lab program)	>
Input a, b, c Calculate discriminate If do I do I do I do I do I and re No reacosts Calculation of Real and unequal roots Real and unequal roots Print in and re Runt ni and re Print in and re Runt ni and re Print java-util-Scanner class oop! E public static void main (String arge co) E scanner scinew Scanner (System-in): double a, b, c, 91, 912, d; System-out println ("Enter the value of a, b, c"): a is c next Double (); b is c next Double (); c = 1c next Double (); c = 1c next Double (); die (dx) System-out-println ("No real roots for the quen quartratic equation"); else if (dx=0) Sustem-out-println ("No real roots for the quen quartratic equation"); else if (dx=0)			
Calculate discriminate If do If do Real roots East roots Real roots Print ri and re Program: Import java util-Scanner class copi: S Scanner ic-new Scanner (System-in): double a,b,c,ri,re,d; System-out-println ("Ruter the values of a,b,c"): a=sc-nextDouble(); c=sc-nextDouble(); c=sc-nextDouble(); c=sc-nextDouble() d=(b*b) - (4 * a * c); If (d<0) System-out-println ("No real roots for the given quadratic equation"); elle if (d>=0) In=sc-h+(Moth roat(d))/(2*a);		Algoritm:	
Calculate discriminate If do If do Real roots East roots Real roots Print ri and re Program: Import java util-Scanner class copi: S Scanner ic-new Scanner (System-in): double a,b,c,ri,re,d; System-out-println ("Ruter the values of a,b,c"): a=sc-nextDouble(); c=sc-nextDouble(); c=sc-nextDouble(); c=sc-nextDouble() d=(b*b) - (4 * a * c); If (d<0) System-out-println ("No real roots for the given quadratic equation"); elle if (d>=0) In=sc-h+(Moth roat(d))/(2*a);		Input a b c	
The off calculation of straing argaers) Stantist of seasons and uniques shorts			-
Calculation of The off and not and not and another and and another and not an			
Program: Program: import java util Scanner class opp: Scanner is - new Scanner (System.in): double a, b, c, 911, 112, d; System.out println ("Enter the values of a b, c"): a - sc. next Double (); b - sc. next Double (); c - sc. next Double (); did (d) System.out println ("No real roots for the quent of a b, c"): a - sc. next Double (); c - sc. next Double (); c - sc. next Double (); c - sc. next Double (); d = (b + b) - (4 * a * c); if (d < 0) System.out println ("No real roots for the quent of a b, c") else if (d > -0) Enter (d > -0) Enter (d > -0) Enter (d > -0) C	The state of the s	1	
Priogram: Program: import java util-Scanner: dase oop: Scanner ic new Scanner (System.in): double a, b, c, 911, 912, d; System out println ("Enter the value of a b, c"); a = 8 c next Double(); c = 1c next Double(); d = (b*b) - (4 * a * c); f (d < 0) System out println ("No real roots for the quen of adjustent of a b, c"); else if (d > 0) Supermout println ("No real roots for the quen quadratic equation"); else if (d > 0) Supermout println ("No real roots for the quen quadratic equation");	To race	calculation of	
Real mosts Print 31 and 32 Program: import java util scanner: class opp: Sublic static void main (straing arge cs) Scanner scinew Scanner (System.in): double a, b, c, 91, 92, d; System out printly ("Enter the values of a, b, c"): a = scinext Double (); b = scinext Double (); c = scinext Double () d = (b*b) - (4 * a * C); f (d < 0) System out printly ("No geal roots for the quer quadratic equation"); else if (d > 0) E		JII WILL 312	
Print 311 and 22 Program: import java util Scanner: class opp: Sublic static void main (Straing arge co) Scanner sc-new Scanner (System.in): double a, b, c, 91, 92, d; System.out printly ("Enter the values of a b, c"): a=sc.nextDouble(); b=sc.nextDouble(); c=sc.nextDouble(); c=sc.nextDouble(); d=(b*b) - (4 * a * c); f (d(0) System.out-printly ("No neal roots for the quer quadratic equation"); else if (d)=0) E	il a li	1	
Program: import java-util-Scanner; class opp: Scanner & Enew Scanner (System-in); double a,b, c, 91, 92, d; System-out-printly ("Enter the values of a,b,c"); a = 8c. nextDouble (); b = 4c. nextDouble (); c = 1c. nextDouble (); c = 1c. nextDouble (); given out-printly ("No geal roots for the quen of a double a,b,c"); elle if (d) = 0) Ent= (-b+(Math. 102+(d)))/(2*a);		E equal stoots mosts	
import java util·Scanner class opp: S public static void main (Straing arge cs) S scanner ic-new Scanner (System.in): double a, b, c, 91, 92, d; System out println ("Enter the values of a, b, c") a=sc. nextDouble (); b=sc. nextDouble (); c=sc.nextDouble (); c=sc.nextDoubl		Potent on and one Rount on and one	
import java util·Scanner class opp: S public static void main (Straing arge cs) S scanner ic-new Scanner (System.in): double a, b, c, 91, 92, d; System out println ("Enter the values of a, b, c") a=sc. nextDouble (); b=sc. nextDouble (); c=sc.nextDouble (); c=sc.nextDoubl		0.	
Scanner & new Scanner (System.in): Scanner & new Scanner (System.in): double a, b, c, 91, 92, d; System.out-println ("Enter the values of a b, c"); a= & c. nextDouble (); b= & c. nextDouble (); c= & c. nextDouble (); d=(b*b) - (4 * a * c); i) (d<0) System.out-println ("No heal roots for the given quadratic equation"); elle if (d>=0) E 91=1(-b+(Moth.oa+(d)))/(2*a);		Mogram'	
Scanner & new Scanner (System.in): Scanner & new Scanner (System.in): double a, b, c, 91, 92, d; System.out-println ("Enter the values of a b, c"); a= & c. nextDouble (); b= & c. nextDouble (); c= & c. nextDouble (); d=(b*b) - (4 * a * c); i) (d<0) System.out-println ("No heal roots for the given quadratic equation"); elle if (d>=0) E 91=1(-b+(Moth.oa+(d)))/(2*a);	i	mport java-util-Scanner	
Scanner &c-new Scanner (System.in); double a, b, c, 911, 92, d; System.out.pointln ("Enter the values of a b, c"); a=&c.nextDouble(); c=&c.nextDouble(); c=&c.nextDouble() d=(b*b) - (4 * a * c); if (d<0) System.out.pointln ("No neal roots for the given quadratic equation"); elle if (d>=0) En=&(-b+(Math.ea+(d)))/(2*a);	(lace oop!	
Scanner &c=new Scanner (System.in); double a, b, c, 911, 912, d; System.out.pointln ("Enter the values of a, b, c"); b = &c. nextDouble(); c=1c.nextDouble(); d=(b*b) - (4 * a * c); if (d<0) System.out.pointln ("No neal roots for the given quadratic equation"); elle if (d>=0) En=1(-b+(Math.log+(d)))/(2*a);	2		
Scanner &c=new Scanner (System.in); double a, b, c, 911, 912, d; System.out.pointln ("Enter the values of a, b, c"); b = &c. nextDouble(); c=1c.nextDouble(); d=(b*b) - (4 * a * c); if (d<0) System.out.pointln ("No neal roots for the given quadratic equation"); elle if (d>=0) En=1(-b+(Math.log+(d)))/(2*a);		public static void main (storing arge cs)	
double a, b, c, 911, 912, d; 8ystem.out.pointln ("Enter the values of a, b, c") a = 8c. nextDouble(); b = sc. nextDouble(); c = sc.nextDouble() d = (b*b) - (4 * a * c); f (d(0) System.out.pointln ("No neal roots for the given quadratic equation"); else if (d)=0) En = 1(-b+(Math.soa+(d)))/(2*a);		}	
System out println ("Enter the values of a b, c") a = 8c · nextDouble(); b = 8c · nextDouble(); c = 8c · nextDouble(); c = 8c · nextDouble(); d = (b*b) - (4 * a * c); if (d<0) System out println ("No real roots for the given quadratic equation"); elle if (d>=0) En = 8c · nextDouble(); b = 8c · nextDouble(); c = 8c · nextDouble(); c = 8c · nextDouble(); b = 8c · nextDouble(); c = 8c · nextDouble(); b = 8c · nextDouble(); c = 8c · nextDouble(); c = 8c · nextDouble(); b = 8c · nextDouble(); c = 8c · nextDouble(); c = 8c · nextDouble(); b = 8c · nextDouble(); c = 8c · nextDouble();		Scanner ic-new Scanner (System.in)	
a=&c.nextDouble(); b=&c.nextDouble(); c=&c.nextDouble() d=(b*b) - (4 * a * c); if (d<0) System.outprintln("No neal roots for the given quadratic equation"); elle if (d>=0) En=*(-b+(Math.ea+(d)))/(2*a);		detude a, b, c, M, M2, d,	1 04/
b= sc. nextDouble(); C= sc. nextDouble() d=(b*b) - (4 * a * c); If (d<0) System outprintln ("No neal roots for the given quadratic equation"); elle if (d>=0) En= (-b+(Math. soa +(d)))/(2*a);		V= 86. Wext Dorble ().	2,00
C=10·next Double() d=(b*b) - (4 * a * c); if (d<0) System out-paintln ("No real roots for the given quadratic equation"); elle if (d>=0) En=1(-b+(Math. soa +(d)))/(2*a);			
d=(b*b) - (4 * a * c); if (d<0) System outprintln ("No neal noots for the given quadratic equation"); elle if (d>=0) E n=1(-b+(Math, loat(d)))/(2*a);			
System out-println ("No neal roots for the given quadratic equation"); else if (d>=0) Ens=1(-b+(Math.soa+(d)))/(2*a);			
System out-println ("No real roots for the given quadratic equation"); else if (d>=0) E n=1(-b+(Moth, soat(d)))/(2*a);		n (d(o)	
elle if (d>=0) En = 1(-b+(Math, en a +(d)))/(2 *a);		System outprintly ("No real roots for	the
8 91=1(-b+(Math. eng +(d)))/(2 *a);		given quadratic equation");	
E 91= ((-b+(Math-lgat(d)))/(2*a); 912= ((-b-(Math-sq9t(d)))/(2*a);		else if (d>20)	
912: ((-b-(Math.squt(d)))/(2*a);		3	
112: ((-b-(Math-sq91(d)))/ (22)		n1= (-b+(Math logat(d))) (2*a)	
		nd: (1-b-(Math.sgrt(a)))	

```
System.out. println ("Rootx are real and equal")

System.out. println ("Rootx are real and equal")

System.out. println ("The nortx are: "+91+" and ?...2);

Sustem.out. println ("Roots are real and unqual")

System.out. println ("Roots are real and unqual")

System.out. println ("The orots are: "+91+" and to

("The roots are: "+91+" and to

? ("The roots are: ",...2) and

? ("The roots are: ",...2)
```

```
C:\Users\Adithi\Desktop\java_prgs>javac oop1.java
C:\Users\Adithi\Desktop\java_prgs>java oop1
Enter the values of a,b,c
1
-6
5
Roots are real and unequal
The roots are: 5.00 and 1.00
C:\Users\Adithi\Desktop\java_prgs>java oop1
Enter the values of a,b,c
1
4
5
No real roots for the given quadratic equation
C:\Users\Adithi\Desktop\java_prgs>java oop1
Enter the values of a,b,c
9
-6
1
Roots are real and equal
The roots are: 0.33 and 0.33
C:\Users\Adithi\Desktop\java_prgs>
```

2. Develop a Java program to create a class Student with members usn, name, an array credits and an array marks. Include methods to accept and display details and a method to calculate SGPA of a student.

7 000
Week-4 (Lab perogram-d)
import java util·Scanner
clase student
E uso name
private staing usn name; private int n, i, grolpts, sum, vuolits sum
private in it, o paper
private pour sopa;
double marks(); new double (to);
Student ()
S CAMPAGE AND A STATE OF THE ST
Scanner &c = new Scanner (848+em.in);
System out println ("Enter the number of
Abbjects")
n=sc next int(); oudits = new int(n);
Sum=0. marks-new double Chj.
Oredite sum-o;
2
Vold accepto
\$
Scanner &c = new Scanner (8 ystem.in);
System-out-pointly (" Enter USN and name").
uln= sc- next();
name = bc. next();
for (i o; i/n; i+r)
2
System out printly ("Enter" + (i+1) +" subjects
Maria Maria
marke(i)= sevent Double();
Credite [i] = si-next [nev]
3
5

	void (a)()
	S
	Jan(1=0; 12n; 14-1)
	{
	i) (marke (i) ==100)
	graphi=10;
	decij (marke (i) >=60 &f marke (i) (100)
	99. dp. 1: ((int) (marke (i)/10))+1;
	else if (marke (i) >=40 ss marke (i) (66)
	grapiti - (ind) (markeli]/10)
	Else if (marke Ci) (40)
	grapts=00
	sum: sum + (graptet oredite Eid)
	5
	ga Ci=0; i(n; v++)
	viedits_sum= viedits_sum+ vieditsti]
	1
	sgpa-1/leat) sum/ credite_sum;
	2
	void display()
	1
	System out println ("Student details: ");
	luten out printer Name: trames
	System gut printly ("USN;" + (&Bn);
	System out printly ("USN;" + (&Sn). System out printly ("SGIPA; 1/8:21", 89P9)
	31
	3
	class Student Mair
	{
	public static void main (storing argets)
	2
	Student 8: new Student();
	s-accept()
	2 3 8 display()
-	3 5

```
C:\Users\Adithi\Desktop\java_prgs>java StudentMain
Enter the number of subjects
Enter USN and name
1BM19CS005
Adithi
Enter 1 subject's marks and credits
Enter 2 subject's marks and credits
Enter 3 subject's marks and credits
Enter 4 subject's marks and credits
89
4
Enter 5 subject's marks and credits
100
Enter 6 subject's marks and credits
78
Student details:
Name: Adithi
USN: 1BM19CS005
SGPA: 9.22
C:\Users\Adithi\Desktop\java_prgs>
```

3. Create a class Book which contains four members: name, author, price, num_pages. Include a constructor to set the values for the members. Include methods to set and get the details of the objects. Include a toString() method that could display the complete details of the book. Develop a Java program to create n book objects.

import java utit-Scanner:	
clack book	THE PARTY OF THE P
5	
String name, author;	11/12/11/12
price;	
int num pages,	M. A. Char
book()	
3	1 17 1/2 1/2 1/2 1/2
name = "";	
author="".	will, cold
price-0.01;	8
num-pages=0.	t ingarde B
	tes bottom +
void auspt()	To be a
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	med parts
Scanner &c=new Scanner(Syst	em-in):
apremitate pointing Enter H	u name of
ING BASK. J.	
name: st-nextc)	nalas Baring - Tel
System out println ("Enter the	name of the
author= scruxts;	WININA II.
System out printing" Enter the	prince of He.
	1
Price = sc. next Float();	station a
System out print In [" Enter the	number 1
The over	
hulm-pages = se neutinted	
5	1 1 1 1 1 1
public Storing tostoring()	aron has
\ \{\bar{\chi} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
return "Name: "+name+", Au	tho1: "+
author + " Price! + price + "	Number
en pag ts: "+ num pag 18;	
3,	

```
Jan book Main

E

public static void main (8tring args[])

Scanner sc= new Scanner (8yrtemin);

int pi;

System. out. printlu ("Enter the number of books");

n= scruptint();

book b(J = New book[n];

for (i=0; Kn; l+1)

System. out. println ("Enter "+ (i+1) +" book ditails");

bli J. accept();

3

por (i=0; icn; i+1)

E

System. out. println(bli]);

3

3

3

3

3
```

```
C:\Users\Adithi\Desktop\java_prgs>java bookMain
Enter the number of books
Enter 1 book details
Enter the name of the book
HarryPotter
Enter the name of the author
J.K.Rowling
Enter the price of the book
200
Enter the number of pages in the book
350
Enter 2 book details
Enter the name of the book
Angel-and-demons
Enter the name of the author
DanBrown
Enter the price of the book
350
Enter the number of pages in the book
Name: HarryPotter, Author: J.K.Rowling, Price: 200.0, Number of pages: 350
Name: Angel-and-demons, Author: DanBrown, Price: 350.0, Number of pages: 300
C:\Users\Adithi\Desktop\java_prgs>
```

4. Develop a Java program to create an abstract class named Shape that contains two integers and an empty method named printArea(). Provide three classes named Rectangle, Triangle and Circle such that each one of the classes extends the class Shape. Each one of the classes contain only the method printArea() that prints the area of the given shape.

	Week-8
	Cab paognams.
1.	import java util·leannes
	abstract class shape
	{
	int a,b)
	abstract used southfully
	abetrece void printAreal);
	class Restaught extends Shape
	8
	Restance (int x int u)
	Rectangle (int x, int y) { a=x;
4 1 7	heu
3-26-	3
	void printAgeal)
	C delaw out societh 1" Ages of the gustomale
	{ system out println("Anea of the rustangle is:" + (a#b));
	i: " + (a*b));
	3
	Close T. C. a. a. a. a.
	Class Triangle extends shape
	Triangle Cint x, inty)
	-
	Carry,
	b=y',
	S V
	Void privat Areal)
	& system out printly (" Asea of the triangle
	11:1" + [0.5 * a * 5])
	3
	3
	class Circle extends Shape
	E ciacle (intr)
	Earn's
	0 1
- 1	2

```
void print Asea ()
& Systam out point of the winds is:
1.21+", (3.14 *a *a));
33
dan Shape Main
 public static void main (8 tring args [])
  Canner Sc= new francis ( System ing:
     System out println!" Enter othe lugth and
     width of the settingle");
     2: sometinto;
     y= screet Inter
     Restaugle obl= new Restaugle (1,4);
      861- pountAlel);
     System good printler (" Enter the base lugth
     and height of the triangle");
      2 = Sc. next Int()!
      y= bonutInte);
      Triangle obd = new Triangl (x, y)
      ob a Abrit Area ();
      System-out pointful" luter the redined the incluy
      x= sc-nextTutts;
      Circle ob3 = new Circle Cro;
      063. PrintArea ();
```

```
C:\Users\Adithi\Desktop\java_prgs>java ShapeMain
Enter the length and width of the rectangle

3
4
Area of the rectangle is: 12
Enter the base length and height of the triangle

2
5
Area of the triangle is: 5.0
Enter the radius of the circle

6
Area of the circle is: 113.04
C:\Users\Adithi\Desktop\java_prgs>
```

5. Develop a Java program to create a class Bank that maintains two kinds of account for its customers, one called savings account and the other current account. The savings account provides compound interest and withdrawal facilities but no cheque book facility. The current account provides cheque book facility but no interest. Current account holders should also maintain a minimum balance and if the balance falls below this level, a service charge is imposed. Create a class Account that stores customer name, account number and type of account. From this derive the classes Curr-acct and Sav-acct to make them more specific to their requirements. Include the necessary methods in order to achieve the following tasks: • Accept deposit from customer and update the balance. • Display the balance. • Compute and deposit interest • Permit withdrawal and update the balance • Check for the minimum balance, impose penalty if necessary and update the balance.

2-	import java util Scanner
	clair Account
	8
	Storing name, ace no:
	int type; double bal;
	3 (
	class savacet extends Account
	double a bal dep with time rate min
3 740	void set Data (String n, String an int to don't
	5
	namen;
	ace no = an
	type=t', bal=b';
300	3 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/1
Heri	void dep-acc (doubled, Afriblety)
16	2 Tester and the Report Hall
	dy=d;
	\$ a \(\frac{1}{2} = \frac{1}{2} \)
	bal=baltdepi
	3 b b can the state of the stat
1011	yord display()
	& System out Pointln ("The Hotal balance of
_	the enstormer is: "+bald;
-	17 110 12 110 12 12
	void interest (float time, float in)
	time = Time;
	rate = n;
-	u = bal
	bal = bal * (math pow(Cl+ (nate * 0.01)) time));
	a bal-a
	System out printles " compound interest: "til);
	THAT I WAS A STATE OF THE STATE
	interest: "+bal); after depositing
	3

	void withdraw (double w)
	Escanner sc= new Scauner (System.in); wit=w,
	wit = w,
	if (witzbal)
	Systemout printly ("Your withdrawal amount
	exceeds your balance amound")
	elec
	System out println (" your balance after withdrawd
	System out pourtly (Your balance after withder
	and is! "+ bal);
	2 System. out-printly ("Enter minimum balance allowed")
30000	8 misc. next Double (); 33
	void minimum (double m)
	Ł
	min: m;
	of Chalk min)
	2 System out powintly ("Your balance is less than
N.B.	the minimum appoint");
150,17	System out println ("Your total balance is: "+bal
_	33
	3
	dass curracet extends Account
	\$
	double bal dep wit min, penalty;
	Boolean cheque,
13	void setData (storing n, 8 toring an, int to double)
	name=n;
	act-no: an
	type=t; bal=b;
	7 V
	void deparc (double d, Spyble &)
	2

dep = di bal = baltdip System out paintln ("The total balance of the void display() customer is: "+bal); void withdraw (double us) Scanner &c=new Scanner(system-in);
double m; float p; wit-w; if (wit) bal) System out println(" Your withdrawal amount exteeds your balance amount") elle E bal = bal - wit; System out privally (" your balance after withdrawal is : "+bal); Bystem out printly ('luter minimum balance allowed and
Brasc next politice); p=10 next float(); this minimum (m) void minimum (double m. double p) penalty = P; min: m. if (bal (min) System out printly (" your balance le than the minimum amount") bul= bal- (min-bal) * penalty * 0.01 System out printel " your total balance is: "they

class AccountMain E public static void main(string agss) int s na cuit, c.n. cuit, i, che; string n, an; double of, b. w.m. floot Time, n.p; Scanner htenew Scanner System. (1); system out println ("Enter the number of cultomers with havings account"); A no cuit - so restintly ("Enter the number of cultomers with current account"); c no cuit - so restintly ("Enter the number of cultomers with current account"); can cuit observation(); lar acct observation(); lar acct observation(); system out println(); Savings account"); for (i -o; i < s no cuit; it) for (i -o; i < s no cuit; it) n= se next(); system out println("enter "tith" customers name and account number); n= se next(); b= se nextbouble(); observationable(); d= senextbouble(); observationable(); observationab		Date /
public static void main (etaing ages) int snews (no wit, i, che, string n, an; double of, b, w, m; front Time, n, p; Scanner he new scanner (system in); system out privater (" Enter the number of customers with havings account"); I no cust - se next inter! System out privater (" Enter the number of customers with current account"); c no cust - se next inter! (an acct obsid = new say acct (s no cust); if (s no cust); if (s no cust; it) System out privater (" Savings account"); for (i=o; i < s no cust; it) n= se next); an scrust(); b= se next outle(); obs (i] . At Data (n, an, 18, b); System out privater (" enter the current balance and deposit amount"); b= senext Double(); obs (i) deplay(); obs (i) diplay(); obs (i) diplay(); obs (i) diplay();		class AccountMain
int s nexul, cno cust, i, che; String n, an; double of b, w, m; fleat Time, 9, p; Scanner he=new Scanner (system-as); System-out privitly ("Enter the number of customers with savings account"); L no cust - se next Intl); System-out privitly ("Enter the number of customers with current account"); c no cust - senet Intl); can acct obsid=new sav accl (s-no cust]; if (s-no cust)) System-out printly (" savings account"); to (i=o; i < 1 no cust; it) Cobatil: New Sav acctl; Sustem-out printly ("enter "+ city) +" customer's name and account number"); n: se next!; an-servet!; b=se next Double!; obstil dep-acc (d. s);		E
Stainer N. an; double of b. us, m; fleat Time, 91, p; Scanner Ne=new Scanner (System in); lystem out privitly ("Enter the number of cultimers with savings account"). L no cust: sc next inter. System out privitly ("Enter the number of customers with current account"); C no cust: sc next Inter. Paracel obsers: new Sav accles no cust 7: Curr acct ob c cs-new Curr accel c no cust 3; if (s_ne ust>0) System out printly (" Savings account"); tol (i=0; i < s no cust; it) C obsers: New Sav accels; System out printly ("enter" + city) + "customer's name and account number"); n: sc next! an: scruet! an: scruet! b=sc next Double(); chs (i] . A et Data (n, an, 18, b); sustem out printly ("enter the current balance and deposit amount"); b: sc next Double(); d: sc next Double(); obsers: display(); obsers: display(); obsers: display();		public static void main (string ages ())
Stainer N. an; double of b. us, m; fleat Time, 91, p; Scanner Ne=new Scanner (System in); lystem out privitly ("Enter the number of cultimers with savings account"). L no cust: sc next inter. System out privitly ("Enter the number of customers with current account"); C no cust: sc next Inter. Paracel obsers: new Sav accles no cust 7: Curr acct ob c cs-new Curr accel c no cust 3; if (s_ne ust>0) System out printly (" Savings account"); tol (i=0; i < s no cust; it) C obsers: New Sav accels; System out printly ("enter" + city) + "customer's name and account number"); n: sc next! an: scruet! an: scruet! b=sc next Double(); chs (i] . A et Data (n, an, 18, b); sustem out printly ("enter the current balance and deposit amount"); b: sc next Double(); d: sc next Double(); obsers: display(); obsers: display(); obsers: display();	1	
double of, b, w, m, float Time, 91, P; Scanner he new Scanner (System in); System out printly ("Enter the number of whitemers with savings account"); I no cust - sc next inter! System out printly ("Enter the number of customers with current account"); c no cust - sc next Intel; far acct obser - new Sar acct [s no cust]; if (s no cust >0) System out printly (" savings account"); for (i=0; i < s no cust; it) obser - new Sar acct [s' system out printly ("enter "t cit) "customers name and account number"]; n = sc next (); b = sc next vouble(); obser out printly ("enter the current balance and diposit amount"); b scnext louble (); obser diplay(); obser diplay(); obser diplay(); obser diplay(); obser diplay();	-	
Scanner he new Scanner (System de); System out printly ("Enter the number of cultomers with savings account"); L no cust = sc next int(); System out printly ("Enter the number of customers with current account"); c no cust = sc next int(); sav acct obscij = new sav acct [s ne cust]; cur acct obscij = new sav acct [s ne cust]; if (s ne cust >0) System out printly (" savings account"); for (i=0; i < s no cust; it) Costij - New sav acct]; sustem out printly ("enter t customers name and account number"); n = sc next]; obscij - set Data (n an 18, b); obscij - set Data (n an 18, b); system out printly ("enter the current balance and deposit amount"); b = senext Double (); obscij - dep-acc (d. s); obscij - display(); Obscij - display(); Obscij - display();	H	
Scanner ht=new Scanner (System is); System out privated ("Enter the number of customers with savings account"); L no cust- scanner ("Enter the number of customers with current account"); C no cust- scant Int(); Savaced obs[]= new Savaced[s-no cust]; Curracet obs[]= new Savaced[s-no cust]; if (s-no-cust>0) System out println(" Savings account"); for (i=0; i < s no cust; it+1) Cobs[i]= New Savaced[s'; System out paintln ("Enter "+ cuts)+" customers name and account number"); n= scant(); b=scnext(); b=scnextDouble(); obs[i]- st Data(n, an, 18, b); System out println("Enter the current balance and duporit amount"); b=scnextDouble(); obs[i]- diplay(); obs[i]- diplay(); Obs[i]- diplay(); Obs[i]- diplay();		
System out privater ("Enter the number of customers with savings account"): System out privater ("Enter the number of customers with current account"); c. no cust = Scruct Int(); savacct obser= new Savaccts no cust J' cust acct obser= new Savaccts c. no cust J' if (s. no cust >0) system out printler(" Savings account"); for (i=0; i < sno cust; i+1) cossij: New Savacct(); system out paintler ("enter"; titl) "customers name and account number"); n= scruct() b= sc. nextDouble(); obser= scruct() b= sc. cd. S); obser= display(); obser= display	-	
coltomers with savings account"); L no cust - sc mextinates. System out printly (" Enter the number of customers with current account"); C no cust - sc next Intel; Sau acct obsEJ - new Sav acct [s no cust]; Curr acct obsEJ - new Curr acct [c no cust]; if (s no cust >0) System out printly (" savings account"); for (i=0; i < s no cust; i+1) CobsEJ - new Sav acct (); System out printly ("enter" + citi) + "customer's name and account number"); n = sc next(); b = sc next Double(); obsEJ - se to printly ("enter the current balance and deposit amount"); b = senext Double(); obsEJ - dep-acc (d, s); obsEJ - diplay(); ObsEJ - diplay();	÷	Scanner Ac-new scanner system us,
L no cust = sc next int(s; System out println (" Enter the number of customers with current account"); C no cust = sc next Int(); San acct obs[J= new Say acct[s_ne cust]; if (s_ne cust>0) System out println(" Savings account"); tol (i=0; i < s ne cust; it+) Cobs[i]: New Say acct[s' System out println ("enter" + citi)+" customer's name and account number"); n= sc next(); obs[i]. set Data(n, an, le, b); System out println(" Enter the current balance and diposit amount"); b: senext Double(s); d= sinext Double(s); obs[i]. dep_acc (d. s); obs[i]. diplay(s);	÷	
System out println (" Enter the number of customers with current account"); c no cust = scrust Int(); san acct obscj = new san acct [s no cust]; curr acct obscj = new san acct [s no cust]; if (s no cust >0) System out println (" saving account"); for (i=0; i < s no cust; it+) Cobsci]: New sow_acct(); System out println ("enter" + citil+" customers name and account number"); n = scrust(); b = sc. next Double(); obsci]. Set Data(n, an, 18, b); system out println (" Enter the current balance and duposit amount"); b = scrust Double(); d - scrust Double(); obsci]. dep acc (d. 8); obsci]. display(); Cuter out againt ln (" Enter the time porcod Custom out againt ln (" Enter the time porcod	+	
customers with current account"); cno cust: scrustint(); lar acct obsers: new San accts no cust of: curr acct obsers: new Curr accts c no cust of: if (s-no cust); if (s-no cust); for (i=o; i < s no cust; it+) lobsers: new San accts; sustemout pointln ("enter" + citil+" customers name and account number"); n: scrust(); b=sc. nextlouble(); obsers: sub Data(n, an, 18, b); lossers: amount"); b: scrust louble(); oh seriouble(); oh s		Que term out agint by (" Enter the number of
condenst = Scruct Int(); law-acct obs[J= new Saw acct [s-no cust]; are acct obs[J= new Saw acct [s-no cust]; if (s-no-cust>0) System-out-printly (" Sawings account"); tol (i=0; i < s no-cust; it+) [obs[i]= new Saw-acct []; System-out-printly ("enter" + citi)+" (ustomeré name and account number"); n= scruct []; b=sc-next Double []; obs[i]-set Data (n, an, 18, b); System-out-printly ("enter the current balance and diposit amount"); b=scrict Double []; obs[i]-dep-acc (d. 1); obs[i]-diplay(); obs[i]-diplay(); obs[i]-diplay();		customers with current account");
Savacet obscidence Savaceths no cut is Courracet obccidence Curraceth consciution if (sensustro) System.out.println(" Savings account "); for (i=o; i < s no cut; it) Cossidence println ("enter" + citid" "customeric name and account number"); n=scneet(); b=scnextDouble(); cossidence at println("enter the current balance and deposit amount"); b>scnextDouble(); d=scnextDouble();		
Curracet obcCJ=new Curracet consecut; if (s_ne_cust>0) System.out println(" Sowings account "); for (i=o; i < s no_cust; i+1) CobaciJ= New Sowacet(); System.out println("enter" + citi)+" customers name and account number"); n=scnext(); b=scnextDouble(); cobs (i]. set Data(n, an, 1, b); System.out.println("enter the current balance and diposit amount"); b=scnextDouble(); d=scnextDouble(); obs (i]. dep_acc (d, b); Obs (i]. diplay(); Obs (i]. diplay();		far and obstile new Sar acct [s-no cut]
System out println(" Savings account "); tol (i=o; i < s no cuet; it+) Cobaril: New Sow acct(); System out println ("enter" + ci+i)+" (untomoré name and account number"); n= sc. next(); an=scnext(); b=sc. nextDouble(); obs (i]. set Data(n, an, 1, b); System out println(" Enter the current balance and diposit amount"); b=scnextDouble(); d=scnextDouble(); d=scnextDouble(); obs (i]. dep-acc (d, b); Obs (i). dep-acc (d, b); Obs (i). dep-acc (d, b);		Curr acct speci-new curr acct c me cust];
System. out println(" Savingla account) for (i=o; i < s. no. cut; it+1) berij: New Saw. acct(); System.out. println("enter" + ci+i)+" customeris name and account number"); n: sc. next(); b=sc. nextDouble(); obstij. set Data(n, an, 1, b); b: sc. nextDouble(); and diposit amount"); b: sc. nextDouble(); ol=sc. nextDouble(); obstij. dep-acc cd. (); obstij. dep-acc cd. (); obstij. diplay(); lustem out println("enter the time porcod		in (s_no_cust >0)
obstil: New 8 aw-acctld; System-out println ("enter" + citil+" (ustomeris name and account number"); n= scruxt(); b=sc. nextDouble(); an=scruxt(); b=sc. nextDouble(); obstil. set Data(n, an, 18, b); System-out println("Enter the current balance and diposit amount"); b: scrextDouble(); obstil. dep-acc cd. 8); obstil. dep-acc cd. 8); obstil. diplay(); sustem out println("Enter the time ported	W.	Sustem out printly (" Savings account ");
System-out paintln ("entir" + citi)+" customeris name and account number"); n=10 Next(); b=10 Next(); obs[i]. A ex Data(n, an, 18, b); System-out println ("Enter the current balance and deposit amount"); b=10 Next Double (); obs[i]. dep-acc (d. 1); obs[i]. display(); Obs[i]. display(); Obs[i]. display();		Los (i=o: i < s no cut; i+1)
System out paintln ("enter" + CitIst Customers name and account number"); n=10 Next(); b=10 nextDouble(); obs [i] . A et Dat a (n, an, 12, b); System out println ("Enter the current balance and deposit amount"); b=10 nextDouble(); d=10 nextDouble(); obs [i]. dep-acc (d, 1); obs [i]. display(); lecteur out paintln ("Enter the time period	Ī	THE PARTY AND
System out paintln ("enter" + CitIst Customers name and account number"); n=10 Next(); b=10 nextDouble(); obs [i] . A et Dat a (n, an, 12, b); System out println ("Enter the current balance and deposit amount"); b=10 nextDouble(); d=10 nextDouble(); obs [i]. dep-acc (d, 1); obs [i]. display(); lecteur out paintln ("Enter the time period		Obscit: New 8 av. acct();
n= 10 next()' b=10 nextDouble(); an= screet()' b=10 nextDouble(); obs (i) . 1 th Data(n, an, 1, b); System out println("Enter the current balance and deposit amount"); b: screet Double(); d= screet Double(); obs (i). dep-acc (d. 1); obs (i). dep-acc (d. 1); obs (i). dep-acc (d. 1);		Sustem-out pointly "enter" + Cit 134 Customers
n= screet() b=screet(); obs [i]. set Data(n, an, 1, b); System out println("Enter the current balance and deposit amount"); b=screet Double(); d=screet Double(); obs[i]. dep-acc (d, b); obs[i]. dep-acc (d, b); suter out paintln ("Enter the time period		name and account number")
an=script(); b=sc-nextbourser, obs [i]. A et Data(n, an, 18, b); System out println("Enter the current balance and diposit amount"); b: scriptouble(); d=scriptouble(); obs [i]. dep-acc (d, 3); obs [i]. diplay(); suter the time period lustern out point in ("Enter the time period		A Secretary and the second sec
System out println(" Enter the current balance Supstem out println(" Enter the current balance and diposit amount"); b: se next Double(); d: se next Double(); obstil. dep-acc (d. &); obstil. diplay(); suter the time period lister out paint in (" Enter the time period		anglement() b=10. nexibourers,
System out println ("Enter the accordance"); and deposit amount"); b: se next Double (); obstil. dep-acc (d. 1); obstil. diplay(); suter the time period lister out paint in ("Enter the time period		
and diposit amount) b: se next Double (); obstil. dep-acc (d. 1); obstil. diplay(); suter the time period		lenstein out pointly Enter the accuse
b: senext Double (); d= senext Double (); obstil. dep-acc (d. &); obstil. diplay(); lustern out parit In ("Enter the time pariod		and diposit amount,
obstil diplay(); Obstil diplay(); Surter out sount in (" Enter the time period		5: se next Double();
Obstil diplay(); Obstil diplay(); Rustern out pourt in (" Enter the time ported		d- senext Double ();
Obstil display () Enter the time period		obstil. dep-acc cd, &d,
Rustom out Doubt and Cutta for		
and rete of interest		Quetern out againt in Court in
		and rete of intent

Time= Scnext Floate); In = 81 next Float(); obstil interest (Time, 3); System out printer ("Enter the withdraway amount") W. Acnextosuble(); obstit. withdraw (w); Systemout print In (" Enter ministium balance allowed ") m= sc. nostbouble(); obstil minimum cm? if (cnocust >0) System out printle ('-- Current accountforti=0; is chouse; i++) obcai): new Curraccte) System out printly (" Eut in "+ ci+r)+" customer's name and account number and current balance" M=s(next() an- sonext() b = scruptDoublecs; obclid set Data (n, an, 2, 6); System-out-println C"Enter 1 if the customer has a chique book else press o" " che: screedintly, i) (che == 1) obcti). cheque false System out println C"Enter the deposit amount 1 = 1(next Double () obctid.dep-acc (d); obc [i]. display(); System out point lu ("Enter withdrawal amour W. Sc. next Doubless. obeti? withdraw (a) 333

```
C:\Users\Adithi\Desktop\java_prgs>java AccountMain
Enter the number of customers with savings account
Enter the number of customers with current account
---Savings account---
Enter 1 customer's name and account number and current balance
Aditi
59394903
1000
Enter the deposit amount
The total balance of the customer is: 1200.0
Enter the time period and the rate of interest
Compound interest: 36.0
Balance after depositing interest: 1236.0
Enter the withdrawal amount
500
Your balance after withdrawal is: 736.0
Enter the minimum balance allowed
500
---Current account---
Enter 1 customer's name and account number and current balance
Anu
64689900
2000
Enter 1 if the customer has cheque book else press 0
Enter the deposit amount
The total balance of the customer is: 2100.0
Enter the withdrawal amount
Your balance after withdrawal is: 600.0
Enter the minimum balance allowed and the service charge percentage
700
Your balance is less than the minimum amount
Your total balance is: 599.0
C:\Users\Adithi\Desktop\java_prgs>
```

6. Create a package CIE which has two classes- Student and Internals. The class Personal has members like usn, name, sem. The class internals has an array that stores the internal marks scored in five courses of the current semester of the student. Create another package SEE which has the class External which is a derived class of Student. This class has an array that stores the SEE marks scored in five courses of the current semester of the student. Import the two packages in a file that declares the final marks of n students in all five courses.

	Weck-9- Lab program-6.
ı	File-Sibudent, java
H	The state of the s
H	package (IE)
H	
	S public string name usn,
	public int Jem;
0	303482037 242
Ì	File - To true le jours
	File-Inturnals java
	package CIE;
	import java util & canner
	public dan Internals extends student
	1 de la companya de l
	Scanner scenew Scanner (System in):
	Displication of the contraction
	public void accept (int &, Etring usas stains
i	Public void accept (int &, Estring USN, Storing Name, int Sem)
i	int i
	VAN = U S N',
	name: Name; Lem: Sem;
	107 (100)
	2 Sulton and a
	S system out print In ("Enter "+s+" students interhals marks in "+ (i+1)+" subject out of interhals tip: sc. next [+s):
	50") Students
	introcks til: 10 10
) and MI)
	3

file-Externaljava
Parkage SELD;
import CIE. V;
police COC
import java util·leanner;
public class External extends (18.84ml)
Jeanner &c= New Scanner (Sustamin)
public int extmarks[] = how int ger.
audic void accept (int i String uga etgi
Name int Sem)
unti:
Uln= V3N;
name = Name.
for li=0; ((5; (++))
C 0. strong out 03: 11 ("10 ten "10+" 11 0 0"
S System. out. printle ("Enter "+8+" student's external marks in "+ lit1) + "Subject out 9
100"];
extmarks tid= sonextInt();
3
3
3
file - marks java -
import cit. (x)
import SEE. 4.
import java util Granner;
clais marks
E gublic state void main (string args ())
2 int n, i, j', Sem;
Staing USN, Name;
Stanner St. new Stanner (System in)
System out printly ("Enter The number of
Gradents ");
n= stomportInt()

CIE. Internals cietti new CIE. Internals [n] SET External sector new SEE External Con for (i=o; icn, itt) lystem ord pointln ("Enter" 4 (44) + " studente USN, name and sem"); USN= 10 Next 1). Name- scruxtes; Sem- ecnet(); Weti]: new ClE Internal(); we (i). accept (i+1, USN, Name, Sem); see [] - new SEE Extornal() Leelid allegs (it! USN, Name, Sem); for li-o, icn; itt) System out println(" -- Details of student System out printly ("USN:" + GETIJ USN) System out printly ("Name: "+ Ge al name) System out paintly (" Semester, "+ accij leng for (j=0; j(8) j+1) System out private ("Final marks in" + (j+1)+
" subject: "+ (well) internants (j) + see (1) extmarby [] (2))). 3 yetem out printly ();

1	Programa Control	1
	Procedure;	
	> javac Student-java Student-clau file in dragged into folder > javac Internals-java Internals-clau file is dragged into folder > javac External-java External-clau file in dragged into folder > javac markinava	r cli
	> java marks java	
	Constitution of Constitutions of Constit	

```
:\Users\Adithi\Desktop\java_prgs\package1>javac Student.java
C:\Users\Adithi\Desktop\java_prgs\package1>javac Internals.java
 :\Users\Adithi\Desktop\java_prgs\package1>javac External.java
 :\Users\Adithi\Desktop\java_prgs\package1>javac marks.java
C:\Users\Adithi\Desktop\java_prgs\package1>java marks
Enter the number of students
Enter 1 student's USN, name and sem
1BM10CS001
Aditi
Enter 1 student's internals marks in 1 subject out of 50
Enter 1 student's internals marks in 2 subject out of 50
Enter 1 student's internals marks in 3 subject out of 50
Enter 1 student's internals marks in 4 subject out of 50
Enter 1 student's internals marks in 5 subject out of 50
Enter 1 student's external marks in 1 subject out of 100
80
Enter 1 student's external marks in 2 subject out of 100
90
Enter 1 student's external marks in 3 subject out of 100
Enter 1 student's external marks in 4 subject out of 100
100
Enter 1 student's external marks in 5 subject out of 100
98
Enter 2 student's USN, name and sem
1BM10CS002
Anu
Enter 2 student's internals marks in 1 subject out of 50
Enter 2 student's internals marks in 2 subject out of 50
Enter 2 student's USN, name and sem
1BM10CS002
Anu
Enter 2 student's internals marks in 1 subject out of 50
Enter 2 student's internals marks in 2 subject out of 50
Enter 2 student's internals marks in 3 subject out of 50
Enter 2 student's internals marks in 4 subject out of 50
Enter 2 student's internals marks in 5 subject out of 50
Enter 2 student's external marks in 1 subject out of 100
Enter 2 student's external marks in 2 subject out of 100
Enter 2 student's external marks in 3 subject out of 100
Enter 2 student's external marks in 4 subject out of 100
Enter 2 student's external marks in 5 subject out of 100
89
---Details of student 1---
USN: 1BM10CS001
Name: Aditi
Name: AUILI
Semester: 2
Final marks in 1 subject: 80
Final marks in 2 subject: 95
Final marks in 3 subject: 93
Final marks in 4 subject: 95
Final marks in 5 subject: 92
---Details of student 2---
USN: 1BM10CS002
Name: Anu
Name: Allu
Semester: 2
Final marks in 1 subject: 84
Final marks in 2 subject: 86
Final marks in 3 subject: 69
Final marks in 4 subject: 81
Final marks in 5 subject: 88
```

C:\Users\Adithi\Desktop\java_prgs\package1>

7. Write a program to demonstrate generics with multiple object parameters.

```
Week-10 - lab program 7
class TwoGren(TV) {
 Tobl;
v obd;
Two Gren(T 01, voa) {
001=01.
 062=02;
gerself & how Types DE
3 () Idobsp T
neturn obli
  dass Simplien &
 public static void main (Etaing args (3)
   ? Two Gen Boolean, Doubles Con 050 809 9 16
   (true, 563.979);
       tgoby show Types ();
       bestien v= tgobj. gd db(C);
      double d=tgobj. getob 200;
```

```
C:\Users\Adithi\Desktop\java_prgs>javac generics.java
C:\Users\Adithi\Desktop\java_prgs>java SimpGen
Type of T is java.lang.Boolean
Type of V is java.lang.Double
value: true
value: 568.979
C:\Users\Adithi\Desktop\java_prgs>
```

8. Write a program that demonstrates handling of 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 Wrong Age() when the input age<0. In Son class, implement a constructor that cases both father and son's age and throws an exception if son's age is >=father's age.

1,10.6
Week-10-lab perogram 8
inval
cleer father
S in taker
Father (int age) E tru s
E try & Chuck (age); Catch (cross)
Check (age)
5
Catch (Excpe) E bystem out println (e+ Age cannot be nightive.")
2 System out printly (e+" A
nigative.")
2
S if (a(0)
£ 1/ (a(o)
twow new Excols.
Eystem-out-pointlu ("No exception in fathur's
age")
8
3
class Exp extende Exception
& Rublic Ething to Stains
9 public 8 tring to 8 tring oge"; 8 return "wrong oge";
3
3
class Son extends father
2 int 8-age;
E int 8-age; Son (int 1, int 8)
S and a state of the state of t
Super (1):
thy of the state o
E chick (4, 5)
catch (Excp.e)

```
2 System out paintly (c+ "Son's age cannot
        greater than or equal to fatheringe.
       void check ( int fa, i've son) throws Excep
Static
          throw new txcp();
        System out printly ("No exception in
          son's age")
 dass excomain
  Public Static void main (String agel )
      Scanner he now Scanner ( system in);
     Express out printin ("Entor the age of father
       and son");
       = &cnextInt();
      1= sincettuell
       Son ob: new son 4, s)
```

```
C:\Users\Adithi\Desktop\java_prgs>javac excp.java
C:\Users\Adithi\Desktop\java_prgs>java excpMain
Enter the age of father and son
50
20
No exception in father's age
No exception in son's age
C:\Users\Adithi\Desktop\java_prgs>java excpMain
Enter the age of father and son
20
50
No exception in father's age
Wrong age. Son's age cannot be greater than or equal to father's age.
C:\Users\Adithi\Desktop\java_prgs>java excpMain
Enter the age of father and son
-80
50
Wrong age. Age cannot be negative.
Wrong age. Son's age cannot be greater than or equal to father's age.
 :\Users\Adithi\Desktop\java_prgs>
```

9. Write a program which creates two threads, one thread displaying "BMS College of Engineering" once every ten seconds and another displaying "CSE" once every two seconds.

```
Week-11 - lab program-9
 clas NowThread implements Runnable &
 int In:
 Thousand +.
 NewThread (Sitring threadname int a)
  name: threadname;
  n-a;
  to new Thread ( this name):
   t. start();
  public void run()
    try &
     ( ) Wind ( 5; 1)0; 1-
      Systemout point in ( name)
         Thread sleep (10000);
      else ( cn== 2)
        Thread sleep (2000);
    catch (Interrupted Exception e)
   ? System out paintly name + "Interrepted!)
333
dals MultiTheadMain
 ¿ public static void main(string args (3)
 33
```

```
C:\Users\Adithi\Desktop\java_prgs>java MultiThreadMain

BMS College of Engineering

CSE

CSE

CSE

CSE

CSE

CSE

CSE

BMS College of Engineering

C:\Users\Adithi\Desktop\java_prgs>
```

10. Write a program that creates a user interface to perform integer divisions. The user enters two numbers in the text fields, Num1 and Num2. The division of Num1 and Num2 is displayed in the Result field when the Divide button is clicked. If Num1 or Num2 were not an integer, the program would throw a NumberFormatException. If Num2 were Zero, the program would throw an Arithmetic Exception Display the exception in a message dialog box.

Con
Re Weck-12 - Lab program-10
C The particular transfer of the state of th
import fawarth francis
import javaawt. *;
(most javanestraventi)
public class DOPID extends Frame implements
Matientitener
& Button b;
Textfield n1, n2, 91;
Public vop10U
{ settayout (new Flowlayout());
6= nels Button ("Divide")
Label numbl = new Label ("Num! : ", Label-RIGHT)
n1=nas TextAdd(10)
add (numb!)
addeni)
Label numbd=new Label ("Numd: "Label RIGHT)
na=new textfieldcroj;
add(numba),
addina)
Label res-new Label "Rusult: "Label-RIGHTY
91=new TextFieldao);
add (res)
add(n)
add(b)'
b. & add Action Liestener (this), Adaptact
addwindowlistener (new Mywindow)
9
public void actionPerformedlActionEvent al
[int 1=0; 1=0;
try!
1 integripareint (night cathal)
- Integer passe but the gentlesses
3
try! i= Integr passe Int (niget Text()); j= Integer passe Int (na. get Text()); }

catch (Number format Exception e) E 1= "Number & Format Exception"; n. set Text (" "). Dialog Box do = new Dialog Box (this, "Dialog", 2).
db. sod Visible (torne): ruturn try if (j== 0) throw new Aritametic Exception(); double q : (double) i/j; 1 = Double tostaing(9), A let Text (s); catch (Asithmetic Exception e 1: "Arithmetic Recopasson Exception"; n. setText(" "); DialogBox db: new DialogBox (this, "Dialog", db. set Visible (trug) public static void main (etaing args ()) oopio appuin-new oopiocy; appuir set Size (new Dimension (300, 180)). appenin set Title ("Division") appurin- set Visible (true); dals MynlindavAdapter extends WindowAdapter Public void window Cloring (Mindow Event we & System exit(0);









