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.

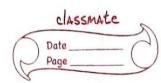
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2. Develop a Java program to create a class Student with members usn, name, an array credits and an array marks. Include methods to accept and display details and a method to calculate SGPA of a student.

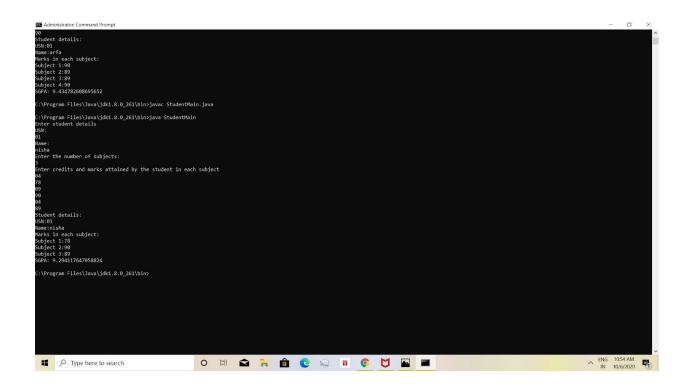


Daulok a fava program to create a create structure with memberer USh, norme, on away created and on array marks thereby methods to occupt and display deboils and a helhod to calculate Scrpa of a exterior import gava util scanna; class student Private intusn; Private string name; Private int creditions Private double make (); Private double sum=0; Private double suppa; Private double credit-Points Private double sum=0; void gettoctails () System out produce (" Theo shedut retails: (m'). Scanno SI = new Scanus (System in); ush = SI most Int (); home = SI. next (); credit = new int [8];

make - new double (8); (or (int 1=0; 128;1++) System out printin (" Enter credits ["+9+")"). (redits [1] = SI. nest Int (); Sylla out printin (1' Fite makes ("+1+)");
mosts (i) = SI. nort Doubles); Sum = Sum + credits (77; (medit - points = credits (i) + marke(i): Sum = Sum + Credit - points; Supa = SUM (sum; +) 12 1XE void printodails () Sylan out print in ("home : 14 home). System and print in ("Us in no " + USD); for (int i=0; i < 8; i++) System out partly (" credits: "+ Credit (i)); Sphoout - print In ("marks". "+ Symous printla ("SlapA - "+SlopA)

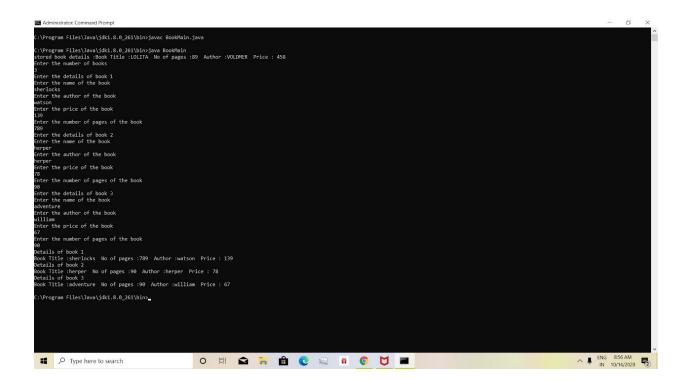


Page
Clare Student Main
Public Station (10)
Public Static void main (String vergs [7)) Shoudent SI[] = new student (1);
bor Eint i = 0; i <1; i+1)
SI[i] = 0
SICID. get Betail (); SICID. print petails ();
3 String Petrill ?;
3
5.



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.

classmate Emport gara, util. +; Closs Book ? String nome; string author; ant price; Port num-pages; BOOKCO this name = "LOLITA" Has. author = "VOLDMER"; this . price = 458; 4 this num pages = 89; vold get is Svannes b = new Boarnes (System Ph.); Systemous frintle ("Forty the name of the book) home = b. nort(). outhor = 5- next(); System out printles (" Ente the price of the books?) price = b. nox tent (1) System out - proller ("Enter the number of page of the book"),



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 andCircle such that each one of the classes extends the class Shape. Each one of the classes containonly the method printArea() that prints the area of the given shape.

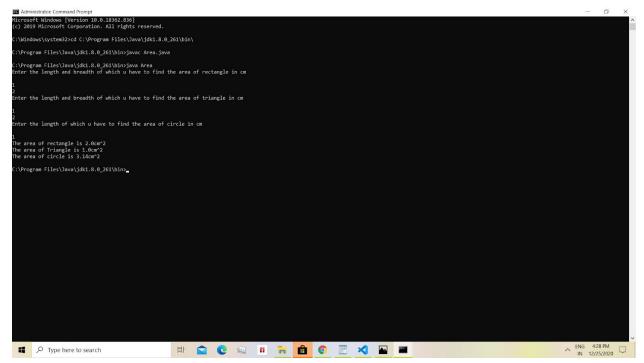
03/11/800 1 import gava util sannu; abstract close shape of int dugth, breadth; Void print Areals closes Rectangle exclude Shape double ornar; void Printhea() (

oua R = (length i breadth);

System aut. frintln(" "the area of reclongle "s" "torrel chose Triongle extende shape double areat; voga printarea () } area t = (0.5) & (length & breadth); System out print In (" the orice of triongle is" towner):

class circle extends shape double onac; void print Area () 5 ano c= (3.10) & (long H & longth): "Sgitum out print in ("The dena of wich is "taked) Class Area Public Stockie void malor (String args []) Scanner Layston in); Restongle RI = new Restongle(); Triangle TI = new Triangle () Circle C, = new Circle (3: Syllim act printles ("I to to the leight am breath of which you have to find the area of rectongle in (m \n'); Re. lugh = A. noxt Int (); RI- breake = A neat Int (); System out print by (" the the lungth and breadt of which you have to find the and of triangle in (m \n"); 10 Ti. lingth = A. nest Int ();

TI breadth = A nest Int (); System. out. println ("Ento the length or reduce of which you have to find the area of circles, com In"); C1: lugth = A. next Int (); Riprid Ara (); II. brist Arcalij Ci Mint Arwall; (1 com parts) alpen tops where silled



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.

Import Java. Util. scanner; Close Bonk int deposit-boloncej Int with draw-bolonce; 14 1/11 String cultome - hand; String Acoust - Number; String Acoust - Type; Int Balon (a = 27890; void accept co Scarra S= new Scarner (System 1,1)

System aut frintln (" (That Ho watome home In");

Custome home = Sinuates; System-out-front In ("Enter the Account Number In"). Account - Number = Smoot () Symmathyintle ("Ento the Account Type In"); Account Type = Snoot (1) void display() system - out-prittel" custome Name : " + custome name"

System out printle ("Account Number: " tAccount Number Sylha out print In ("Account Type; " HARCount Type) class carracet intende Bonks Port updotal bulence; int Ajtu - cwithdrawn; int updahal a lost-cholonce; Int cdepobacy opdated-bolonce = Bolonce + alposit-bolonce when updated - bolonec; Put cwith_ba() } After - cove th drawn = (Cupdated tolon ce) (withdraw -balon (e)): return After - cwithdrawn; int wininum () "([After - (with dream) <= (2000)) updolod - lost - cholonce = ((M/ty - (W) thderoug)

system out frintla ("you have outnimen belonce below 2000 90 a howe doct 200 vs11); volum updochd lost-Cholonce; dse rehun After - cwithdrown; palor - and Her) Close San occ + ordender Bonk of int supdated - bolonce; int After - Swithdreven; int wholated - dost-sbolonce; int sdepo-balis supploded + bolonce = Bolonce + dyosit-bolonce; y chum supposted - bolonce; 3 - worded - love shally wider Int intent () double ==0.08; int h=12; 10 Nt f=5;

coumpound interest = cint) (supposed balance) + (Moth. 10 N((1+(r/n)), (n++))) return compound - interest; Int swith-back of Apr - swithdrawn = ((compound integet) -(not drow -balance)); Yetrum After - Swithdrawn; 3 constad - I labor to int minimum () [([After-swith drown) = (1000)) of dold - lost balance = ((After -swithdress) vehim updated -lost-sholonce Julian After - Swithdrawn

class Transactions ? public Stolic void main (string args ()) of Scannel Y = new Scannel System d's); curra out & (A = new curraciti) CA. oright (); System -out printle ("thu the money a want to diposit in current occount in rupeed"); (A. diposi + - bolonce = r. hect Int(); (A. display (); System out front in (11 After your deposition of bolonce is RS- 11 + CA colopo: bolonce + "In Now you total 0) 11

