## QUADRATIC EQUATION

```
import java.util.Scanner;
class Quad_Eq_cal{
 public static void main(String [] args){
   int y=0;
   Scanner sc=new Scanner(System.in);
   System.out.println("General form of a quadratic equation is ax^2+bx+c=0");
   do{
     System.out.print("\nEnter value of a=");
     int a=sc.nextInt();
     System.out.print("Enter value of b=");
     int b=sc.nextInt();
     System.out.print("Enter value of c=");
     int c=sc.nextInt();
     float d=(float)(Math.pow(b,2)-4*a*c);
     if(d<0){
       System.out.println("There are no real solutions");
     }
     else if(d==0){
       System.out.println("It has one repeated root(2 equal roots):");
       float r=-b/(2.0f*a);
       System.out.println("x="+r);
     }
     else{
       System.out.println("It has two distinct roots:");
       double r1=((-b+Math.sqrt(d))/(2*a));
```

```
System.out.println("x1="+r1);
    double r2=((-b-Math.sqrt(d))/(2*a));
System.out.println("x2="+r2);
}
System.out.println("\nDo you want to calculate again?(yes=0 and no=1): ");
y=sc.nextInt();
}while(y==0);
}
```

| 67   | store 67   |
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| PROGRAM I  |  |
| Develop a Java program that prints all real solutions to quadratic equations and torte = 0. Read in a, b, c and  | Costan and its (No. In the Year most ")  |
| quadratic equations and + bx +c = 0. Read in a, b, c and   | System out printly ("Equation has no real rook")   |
| use quadratic formula. If discriminate b2- 4ac is negative.  | James & Francisco America and the second of conference   |
| display a message stating that there are no  | The state of the s |
| Yeal solutions.  |  |
| import java-util-scanner; 100 mmm house hor  | Output 1   |
| Class Ruadea f   |  |
| Public Static vold main (string (3 args)   | Enter coefficient of a:  |
| 7  | Enter coefficient of b:  |
| Scanner Sc = new Scanner (system. in);   | 5  |
| System out Printly ("Enter the coefficient of a;");  | Enter coefficient of c:  |
| double a = sc. next Double ():   | 3  |
| System out print In ("Enter the coefficient of b:");   | Equations have two real rooks -1.0 -1.5  |
| double b = sc. nextDouble ();  |  |
| double disc = b+b-4 *a *c;   | Output 2   |
| if (disc >0)   | Enter the coefficient of a:  |
| AND A DECEMBER OF THE PARTIES OF THE | The same of the sa |
| double rootl=(-b+Math.sgxt (disc))/(2*a)   | Ener the coefficient of b:   |
| double root2=(b+ Math.sqrt(disc))/(2*a);   |  |
| Sycken-out-printly ("Equation has two real roots:"+root) +" "+root)  | Enter the coefficient of c:  |
| 100+5. +100£1 + +100£2;  | Equation has one real solution -2.0  |
| du if Colise == 0)   | CYUA NON MUS MAY PERCENTIAL  |
| 3  | Output 3   |
| double root = -b/2*a;  | Enter the coefficient gas  |
| Syclem-out-printly C'Equation has one real   | make week to the Same with a share we weeken?  |
| Solution: "+ root);  | Ever the coefficient of bis  |
| State of the state | 2 Andrew a charge of the control of  |
| else   | Enter the coefficient of c:  |