```
	private static Scanner sc;
	public static void main(String[] args)
	{
		double a, b, c;
		double root1, root2, imaginary, discriminant;
		sc = new Scanner(System.in);

		System.out.print(" Please Enter the Values of a, b, c of Quadratic Equation : ");
		a = sc.nextDouble();
		b = sc.nextDouble();
		c = sc.nextDouble();

		discriminant = (b * b) - (4 * a *c);

		if(discriminant > 0)
		{
			root1 = (-b + Math.sqrt(discriminant) / (2 * a));
			root2 = (-b - Math.sqrt(discriminant) / (2 * a));
			System.out.printf("\n Here discriminant is greater than 0 , so roots are real and distinctive, therefore, root1 = %.4f",r
			System.out.printf("\n root2 = %.4f",root2);
		}
		else if(discriminant == 0)
		{
			root1 = root2 = -b / (2 * a);
			System.out.printf("\n Here discriminant is equal to 0 so roots are real and equal, therefore, root1 = %.4f",root1);
			System.out.printf("\n root2 = %.4f",root2);
		}
		else if(discriminant < 0)
		{

			System.out.println("\n Here discriminant is less than 0 therefore,the roots are imaginary");
		}
	}
}
```

Command Prompt

```
Microsoft Windows [Version 10.0.18363.1082]
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C:\Users\Aman Sinha>cd desktop

C:\Users\Aman Sinha\Desktop>cd OOJ lab

C:\Users\Aman Sinha\Desktop\OOJ lab>javac qe.java

C:\Users\Aman Sinha\Desktop\OOJ lab>java qe.java
 Please Enter the Values of a, b, c of Quadratic Equation : 2
4
6

 Here discriminant is less than 0 therefore,the roots are imaginary

C:\Users\Aman Sinha\Desktop\OOJ lab>javac qe.java

C:\Users\Aman Sinha\Desktop\OOJ lab>java qe.java
 Please Enter the Values of a, b, c of Quadratic Equation : 1
5
4

 Here discriminant is greater than 0 , so roots are real and distinctive, therefore, root1 = -3.5000
 root2 = -6.5000
C:\Users\Aman Sinha\Desktop\OOJ lab>java qe.java
 Please Enter the Values of a, b, c of Quadratic Equation : 1
4
4

 Here discriminant is equal to 0 so roots are real and equal, therefore, root1 = -2.0000
 root2 = -2.0000
C:\Users\Aman Sinha\Desktop\OOJ lab>
```