

⑤ Lab Program - 1

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18M22CS257

```
import java.util.*;
```

```
public class Quadratic {
```

```
public static void main(String args[]) {
```

```
double i, j, k;
```

```
double disc, root1, root2;
```

```
Scanner sc = new Scanner(System.in);
```

```
i = sc.nextInt();
```

```
j = sc.nextInt();
```

```
k = sc.nextInt();
```

```
disc = j*j - 4*i*k;
```

```
if (disc > 0) {
```

```
System.out.println("Roots are real and  
distinct");
```

```
root1 = (-j + Math.sqrt(disc)) / 2*i;
```

```
root2 = (-j - Math.sqrt(disc)) / 2*i;
```

```
System.out.println("Roots are real  
root1: " + root1 + "  
root2: " + root2);
```

```
if (disc == 0) {
```

```
root1 = -j / 2*i;
```

```
System.out.println("Roots are " + root1 + "  
" + " and " + root2);
```

```
}
```

```
if (disc < 0) {
```

```
System.out.println("Roots are imaginary")
```

```
}
```

```
}
```

```
}
```

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Output: Shashidhar B M

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~~2.0~~

1
-4

4

Roots are Root 1: 2.0 and Root 2: 2.0

Case 2:

1
-2
4

Roots are imaginary

Case 3:

1
-5
6

Roots are Root 1: 3 and Root 2: 2.0.