Q.5) Program to find the roots of a quadratic equation.

```
import math


def Roots(a, b, c):

discriminant = b**2 - 4*a*c

if discriminant > 0:

root1 = (-b + math.sqrt(discriminant)) / (2 * a)
root2 = (-b - math.sqrt(discriminant)) / (2 * a)
print(f"The roots are real and distinct: {root1:.2f} and {root2:.2f}")
elif discriminant == 0:

root = -b / (2 * a)
print(f"The root is real and repeated: {root:.2f}")
else:

real_part = -b / (2 * a)
imaginary_part = math.sqrt(abs(discriminant)) / (2 * a)
print(f"The roots are complex: {real_part:.2f} ± {imaginary_part:.2f}i")


a = float(input("Enter coefficient of a: "))
b = float(input("Enter coefficient  of b: "))
c = float(input("Enter coefficient c: "))


if a == 0:
print("This is not a quadratic equation (a should not be 0).")
```

else:
Roots(a, b, c)