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| **Experiment 2 :**  Write a program to find the roots of a quadratic equation and perform boundary value analysis. |
| **Solution:**  #include <bits/stdc++.h>  using namespace std;  void nature\_of\_roots(int a, int b, int c)  {  if (a == 0) {  cout << "Not a Quadratic Equation" << endl;  return;  }  int D = b \* b - 4 \* a \* c;  if (D > 0) {  cout << "Real Roots" << endl;  }  else if (D == 0) {  cout << "Equal Roots" << endl;  }  else {  cout << "Imaginary Roots" << endl;  }  }  void checkForAllTestCase()  {  cout << "Testcase" << "\ta\tb\tc\tActual Output" << endl;  cout << endl;  int a, b, c;  int testcase = 1;  while (testcase <= 13) {  if (testcase == 1) {  a = 0;  b = 50;  c = 50;  }  else if (testcase == 2) {  a = 1;  b = 50;  c = 50;  }  else if (testcase == 3) {  a = 50;  b = 50;  c = 50;  }  else if (testcase == 4) {  a = 99;  b = 50;  c = 50;  }  else if (testcase == 5) {  a = 100;  b = 50;  c = 50;  }  else if (testcase == 6) {  a = 50;  b = 0;  c = 50;  }  else if (testcase == 7) {  a = 50;  b = 1;  c = 50;  }  else if (testcase == 8) {  a = 50;  b = 99;  c = 50;  }  else if (testcase == 9) {  a = 50;  b = 100;  c = 50;  }  else if (testcase == 10) {  a = 50;  b = 50;  c = 0;  }  else if (testcase == 11) {  a = 50;  b = 50;  c = 1;  }  else if (testcase == 12) {  a = 50;  b = 50;  c = 99;  }  else if (testcase == 13) {  a = 50;  b = 50;  c = 100;  }  cout << "\t" << testcase << "\t" << a << "\t" << b << "\t" << c << "\t";  nature\_of\_roots(a, b, c);  cout << endl;  testcase++;  }  }  int main()  {  checkForAllTestCase();  return 0;  }  **Output :**    **Expected Output :**  Table  Description automatically generated |