

# **Polymorphism in C++**

**Elementrix Classes**

# Polymorphism in C++

- ❑ The process of representing one Form in multiple forms is known as Polymorphism. Here one form represent original form or original method always resides in base class and multiple forms represents overridden method which resides in derived classes.
- ❑ Polymorphism is derived from 2 greek words: poly and morphs. The word "poly" means many and morphs means forms. So polymorphism means many forms.

# Real Life Example of Polymorphism in C++

- ❑ Suppose if you are in class room that time you behave like a student, when you are in market at that time you behave like a customer, when you at your home at that time you behave like a son or daughter, Here one person have different-different behaviors.

## Example Program:

```
1 ▾ #include <iostream>
2   using namespace std;
3 ▾ class Calculator {
4   public:
5 ▾   int sum(int a, int b) {
6       return a + b;
7   }
8
9 ▾   double sum(double a, double b) {
10      return a + b;
11  }
12
13 ▾   int sum(int a, int b, int c) {
14      return a + b + c;
15  }
16 };
17
```

```
18 ▾ int main() {
19     Calculator calc;
20
21     // Use methods of the Calculator object
22     int sum1 = calc.sum(5, 6);
23     double sum2 = calc.sum(5.5, 6.6);
24     int sum3 = calc.sum(5, 6, 7);
25
26     cout << "Sum 1 = " << sum1 << endl;
27     cout << "Sum 2 = " << sum2 << endl;
28     cout << "Sum 3 = " << sum3 << endl;
29
30     return 0;
31 }
```

## ✕ Output

Sum 1 = 11

Sum 2 = 12.1

Sum 3 = 18

Process Finished.

>>> |

पढ़िए और पढ़ाइये

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