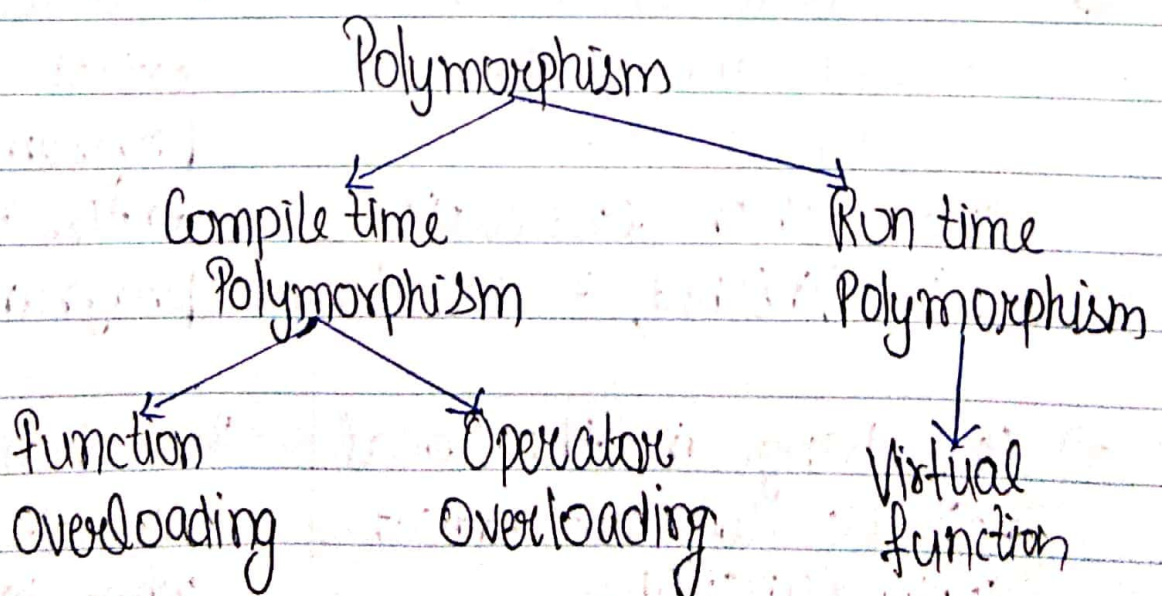


Unit-IV

Polymorphism

- The term "polymorphism" is the combination of "poly" + "morphism" which means many forms.
- Polymorphism is important OOP Concept.
- Polymorphism have ability to take many forms.
- Real life Example:- A lady behaves like a teacher, in a classroom, mother or daughter in a home and customer, in a market. Here, a single person is behaving according to the situations.
- Types of Polymorphism



- Compile Time Polymorphism :- The overloaded function to be invoked is known at the compile time.

→ It is achieved by function overloading and operator overloading which is also known as "static binding or early binding".

- Run time polymorphism :- The function to be invoked is known at run time.

→ It is achieved by method overriding which is also known as "dynamic binding or late binding".

- Function Overloading :- function overloading is defined as the process of having two or more function with same name, but different in parameter is known as function overloading in C++.

handwritten notes by:- jpwebdevelopers.in

Program for function overloading

```
#include <iostream.h>
#include <conio.h>
class display
{
public:
    void show (int i)
    {
        cout << "Printing int : " << i;
    }
    void show (double f)
    {
        cout << "Printing float : " << f;
    }
    void show (char c[10])
    {
        cout << "Printing character : " << c;
    }
};
```

```
void main ()
{
    clrscr();
    display d;
    d.show (4);
}
```



```
d. show (1-2);  
d. show ("palvi");  
getch();  
}
```

Output :- ^{Printing} Int : 4
 ^{Printing} Float : 1-2
 ^{Printing} Character : Palvi

• Operator Overloading :-

Operator overloading is a compile-time polymorphism in which the operator is overloaded to provide the special meaning to user defined data type.

Def:- To assign more than one operation on an same operator is known as Operator Overloading.

There are two types of operator overloading :-

- Unary Operator Overloading
- Binary Operator Overloading