Practical No: 5

Write a program for multiple inheritance

code:

```
#include<iostream.h>
#include<conio.h>
Class Polygon
{
 Public:
 int height, width;
 Public:
 void read(int a, int b)
{
  height = a;
  width = b;
 }
};
Class Output
{
 Public:
 void output (int x)
{
  cout<<" Area is "<<x;
}
};
Class Rectangle: Public Polygon, Public Output
{
 Public:
```

```
int area()
{
  return (height * width);
}
};
Class Triangle: public Polygon, public Output
{
  Public:
  int area()
  {
    return (height * width / 2);
  }
};
Void main()
{
clrscr();
int h, w, choice, a;
cout << "1. Area of Rectangle \n 2. Area of Triangle \n
        Enter your choice:";
cin >> choice;
cout << "Enter height and width:";
cin >> h >> w;
Switch (choice)
{
case 1:
Rectangle r;
r.read (h, w);
a = r.area ();
```

```
r.output(a);
break;
case 2;
Triangle t;
t.read(h,w);
a=t.area();
t.output(a);
break;
default: cout<<"Invalid choice";
}
getch();
}
```

Output:

1. Area of Rectangle
2. Area of Triangle

Enter your choice: 2

Enter height and width: 5

4

Area is 10

B) Write a program for Hierarchical inheritance

code:

```
#include <iostream.h>
#include<conio.h>
#include<stdio.h>
 class staff
{
 Public:
 char name[20];
  int code;
 };
class Teacher: Public staff
 {
 Public:
 char subject[20];
 int experience;
 Public:
 void read()
{
cout<<" Enter name, code, subject and experience of
                                    teacher ";
 gets(name);
 cin>>code;
gets(subject);
cin>>experience;
}
```

```
};
class officer : Public Staff
{
Public:
Char dept [20];
int grade;
public:
void read ()
{
cout << " Enter name, code, department and grade of
                                        officer";

gets(name);
cin >> code;
gets (dept);
cin >> grade;
}
void display()
{
Cout << " officer Details : \n Name : " << name << "\n
        code: " << code " \n Department: " << dept
        << "\n Grade: " << grade;

}
};
class Typist : Public Staff
{
Public:
int Speed, experience;
};
```

```
gets(name);
cin >> code >> speed >> experience >> dailywages;
 }
void display()
{
cout << "Causual Typist Details: \n Name: " <<
      name << "\n code : " << code << "\n speed:"
      << speed << "\n experience " << experience
      << "\n Dailywages" << Dailywages;
 }
};
Void main()
{
clrscr();
int choice;
cout << " 1. Teacher \n 2. officer \n 3. Regular Typist
      \n 4. Casual Typist \n enter your choice,
       whose details you want to enter:";
cin >> choice;
switch (choice)
 {
case 1: Teacher t;
t.read();
t.display();
 break;
case 2 : officer o;
o.read();
o.display();
```

```
Class Regular : Public Typist
{
Public:
int salary;
Public:
void read()
{
cout<<"Enter name, code, speed, experience and
      salary of regular typist";
gets(name);
cin >> code >> speed >> department >> salary;
}
void display()
{
cout<<"Regular Typist Details: \n Name" << name <<
      "\n code" << code << "\n speed " << speed <<"\n
      experience" << experience << "\n Salary" <<
      Salary;
}
};
Class Casual : Public Typist
{
Public:
int dailywages;
Public:
void read()
{
cout<<"Enter name, code, speed, experience, and
      dailywages of the causual typist:";
```

```
break;
case 3: Regular r;
r.read();
r.display();
break;
case 4: casual c;
c.read();
c.display();
break;
default: cout<<"Invalid choice:";
}
getch();
}
```

Output:

1. Teacher
2. Officer
3. Regular Typist
4. casual Typist

Enter the choice. whose detail you want to enter: 1

Enter name, code, subject and experience of teacher : Satish

234

Maths

13

Teacher Details

Name : satish Subject : Maths

code: 234 Experience: 13