

ASSIGNMENT NO :- 5

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BATCH :- S2

Q. Hierarchical Inheritance

Code :-

```
#include <iostream>
using namespace std;
class Furniture
{
public:
    string material;
    int price;
    Furniture() {
    };
};
class Table : private Furniture
{
private:
    int height;
    float Surface_area;
public:
    Table(string &material, int &price, int &height, float &Surface_area)
    {
        this->height = height;
        this->Surface_area = Surface_area;
        this->material = material;
        this->price = price;
    }
    void display()
```

```

{
    cout << "material for table is : " << material << endl;
    cout << "price for table is : " << price << " Rs" << endl;
    cout << "height of table is : " << height << " ft" << endl;
    cout << "Surface area of table is : " << Surface_area << " sq_ft" << endl;
}
};
class chairs : protected Furniture
{
protected:
    string type;
    int Manufacturing_year;
public:
    chairs() {
    };
    chairs(string &material, int &price, string &type, int &Manufacturing_year)
    {
        this->type = type;
        this->Manufacturing_year = Manufacturing_year;
        this->material = material;
        this->price = price;
    }
    void display()
    {
        cout << "material for chair is : " << material << endl;
        cout << "price for chair is : " << price << "Rs" << endl;
        cout << "type of chair is : " << type << endl;
        cout << "Manufacturing year of chair is : " << Manufacturing_year << endl;
    }
};

```

```

int main()

```

```
{  
    string m;  
    string t;  
    int p;  
    int pr;  
    int mfy;  
    int hght;  
    float a;  
  
    cout << "Enter the material of furniture : " << endl;  
    cin >> m;  
  
    cout << "Enter the information of table..." << endl;  
  
    cout << "Enter the price of Table : " << endl;  
    cin >> p;  
  
    cout << "Enter the height of Table : " << endl;  
    cin >> hght;  
  
    cout << "Enter the surface area of table : " << endl;  
    cin >> a;  
  
    cout << "Enter the information of chairs..." << endl;  
  
    cout << "Enter the price of chair : " << endl;  
    cin >> pr;  
  
    cout << "Enter the type of chairs : " << endl;  
    cin >> t;  
  
    cout << "Enter the Manufacturing year of chairs : " << endl;
```

```

cin >> mfy;

Table t1(m, p, hght, a);
cout << "All information for table is -> " << endl;
t1.display();

chairs ch1(m, pr, t, mfy);
cout << "All information for chair is -> " << endl;
ch1.display();
}

```

Output :-

```

vipul-surve@vipul-surve-IdeaPad-Gaming-3-15IHU6:~/second year/CPP$ ./ass5
Enter the material of furniture :
Metal
Enter the information of table...
Enter the price of Table :
1000
Enter the height of Table :
20
Enter the surface area of table :
2000
Enter the information of chairs...
Enter the price of chair :
200
Enter the type of chairs :
wooden
Enter the Manufacturing year of chairs :
2020
All information for table is ->
material for table is : Metal
price for table is : 1000 Rs
height of table is : 20 ft
Surface area of table is : 2000 sqr_ft
All information for chair is ->
material for chair is : Metal
price for chair is : 200Rs
type of chair is : wooden
Manufacturing year of chair is : 2020
vipul-surve@vipul-surve-IdeaPad-Gaming-3-15IHU6:~/second year/CPP$ █

```