TRIBHUVAN UNIVERSITY

INSTITUTE OF ENGINEERING

PULCHOWK CAMPUS

DEPARTMENT OF ELECTRONICS AND COMPUTER ENGINEERING

LAB REPORT ON OBJECT ORIENTED PROGRAMMING

Bachelor's Degree in Electronics, Communication and Information Engineering
FIRST YEAR SECOND PART(I-II)

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LAB 6

TASK 1:

```cpp
#include <iostream>
using namespace std;

class STUDENT{
    protected:
    int marks,roll_no;
    string name;
    public:
        void ask(){
            cout<<"Enter your name, marks and roll number : ";
            cin>>name>>marks>>roll_no;

        }
};
class LEADER:public STUDENT{
    private:
    int position;
    string party_name;
    public:
    void ask_party(){
        cout<<"\n Enter your position and party name : ";
        cin>>position>>party_name;
    }
    void show(){
        cout<<"\n"<<name<<"\n"<<marks<<"\n"<<roll_no<<"\n"<<position<<"\n"<<party_name;
    }
};
int main(){
    LEADER l;
    l.ask();
    l.ask_party();
    l.show();
}
```

TASK 2:

```cpp
#include <iostream>
using namespace std;

class STUDENT{
    protected:
    int marks,roll_no;
    string name;
    public:
        void ask(){
            cout<<"Enter your name, marks and roll number : ";
            cin>>name>>marks>>roll_no;

        }
};
class EMPLOYEE{
protected:
 int salary;
 string office_name;
 public:
    void ask_employee(){
        cout<<"\nEnter your salary and office name : ";
        cin>>salary>>office_name;
    }

};
class OFFICER:public EMPLOYEE,public STUDENT{
    private:
        int position;
    public:
        void ask_officer(){
            cout<<"\nEnter your position : ";
            cin>>position;
        }
        void show(){
            cout<<"\nYOUR DETAILS ARE : ";
            cout<<"\n"<<name<<"\n"<<marks<<"\n"<<roll_no<<"\n"<<salary<<"\n"<<off
ice_name<<"\n"<<position;
        }
```

```cpp
};
int main(){
    OFFICER o;
    o.ask();
    o.ask_employee();
    o.ask_officer();
    o.show();
}
```

TASK 3:

```cpp
#include <iostream>
using namespace std;

class STUDENT{
    protected:
    int roll_no;
    string name;
    public:
        void ask(){
            cout<<"Enter your name and roll number : ";
            cin>>name>>roll_no;

        }
};
class INTERNAL:public virtual STUDENT{
    protected:
    int i_marks;
    public:
        void ask_internal(){
        cout<<"\nInternal marks : ";
        cin>>i_marks;}

};
class EXTERNAL:public virtual STUDENT{
protected:
int e_marks;
public:
void ask_external(){
    cout<<"\nExternal marks : ";
    cin>>e_marks;
}};
class RESULT:public EXTERNAL,public INTERNAL{
```

```cpp
    private:
    int total;
    public:
     void show(){
         cout<<"THE DETAILS ARE : ";
         cout<<"\n"<<name<<"\n"<<roll_no<<"\n"<<(e_marks+i_marks);
     }
};
int main(){
    RESULT r;
    r.ask();
    r.ask_internal();
    r.ask_external();
    r.show();
}
```

TASK 4:

```cpp
#include<iostream>
using namespace std;
class PARENT{
    public:
    PARENT(){
        cout<<"\nconstructor in parent .";
    }
    ~PARENT(){
        cout<<"\ndestructor in parent .";
    }
};
class CHILD:public PARENT{
    public:
        CHILD(){
            cout<<"\nconstructor in child.";
        }
        ~CHILD(){
            cout<<"\ndestructor in child.";
        }
};

int main(){
CHILD c;

}
```

TASK 5:

```cpp
#include<iostream>
using namespace std;
class PARENT1{
    public:
    PARENT1(){
        cout<<"\nconstructor in parent1 .";
    }
    ~PARENT1(){
        cout<<"\ndestructor in parent1 .";
    }
};
class PARENT2{
    public:
        PARENT2(){
            cout<<"\nconstructor in parent2.";
        }
        ~PARENT2(){
            cout<<"\ndestructor in parent2.";
        }
};
class CHILD:public PARENT1,public PARENT2{
    public:
    CHILD(){
        cout<<"\nconstructor in child.";
    }
    ~CHILD(){
        cout<<"\ndestructor in child";
    }
};

int main(){
CHILD c;

}
```