**Q. Write a program to declare a base class student with fields rno and marks in two**

**subjects. Derive another class from this base class with additional attributes total and percentage of marks. Read marks & rno and then print the result from the derived class.**

// Single Inheritance

#include<iostream>

using namespace std;

class student

{

public:

string name;

int sub1, sub2;

void get\_data()

{

cout<<"\nEnter student's name : ";

cin>>name;

cout<<"\nEnter marks of subject 1 out of 100 : ";

cin>>sub1;

cout<<"\nEnter marks of subject 2 out of 100 : ";

cin>>sub2;

}

};

class marks : public student

{

int total;

float per;

public:

void calculate ()

{

total = sub1 + sub2;

per = (total)/2;

cout<<"Total Marks : "<<total<<"/200";

cout<<"\nTotal Percentage : "<<per<<"%";

}

};

int main()

{

marks obj;

obj.get\_data();

obj.calculate();

}

// Multilevel Inheritance

#include<iostream>

using namespace std;

class student

{

public:

string name;

void get\_data()

{

cout<<"\nEnter student's name : ";

cin>>name;

}

};

class data : public student

{

public :

int sub1, sub2;

void display()

{

cout<<"\nEnter marks of subject 1 out of 100 : ";

cin>>sub1;

cout<<"\nEnter marks of subject 2 out of 100 : ";

cin>>sub2;

}

};

class marks : public data

{

int total;

float per;

public:

void calculate ()

{

total = sub1 + sub2;

per = (total)/2;

cout<<"Total Marks : "<<total<<"/200";

cout<<"\nTotal Percentage : "<<per<<"%";

}

};

int main()

{

marks obj;

obj.get\_data();

obj.display();

obj.calculate();

}

// Multiple Inheritance

#include<iostream>

using namespace std;

class student

{

public:

string name;

void get\_data()

{

cout<<"\nEnter student's name : ";

cin>>name;

}

};

class data

{

public :

int sub1, sub2;

void display()

{

cout<<"\nEnter marks of subject 1 out of 100 : ";

cin>>sub1;

cout<<"\nEnter marks of subject 2 out of 100 : ";

cin>>sub2;

}

};

class marks : public data, public student

{

int total;

float per;

public:

void calculate ()

{

total = sub1 + sub2;

per = (total)/2;

cout<<"Total Marks : "<<total<<"/200";

cout<<"\nTotal Percentage : "<<per<<"%";

}

};

int main()

{

marks obj;

obj.get\_data();

obj.display();

obj.calculate();

}