**//Polymorphism > > >**

**class** Student{

**protected** **int** NUM\_OF\_TESTS = 3;

**protected** String name;

**protected** **int**[] test;

**protected** String courseGrade;

**public** Student( ) {

**this** ("No Name");

}

**public** Student(String studentName) {

name = studentName;

test = **new** **int**[NUM\_OF\_TESTS];

courseGrade= "\*\*\*\*";

}

**public** **void** setScore(**int** s1, **int** s2, **int** s3) {

test[0] = s1;

test[1] = s2;

test[2] = s3;

}

**public** **void** computeCourseGrade() {

courseGrade="";

}

**public** String getCourseGrade( ) {

**return** courseGrade;

}

**public** String getName( ) {

**return** name;

}

**public** **int** getTestScore(**int** testNumber) {

**return** test[testNumber-1];

}

**public** **void** setName(String newName) {

name = newName;

}

**public** **void** setTestScore(**int** testNumber, **int** testScore){

test[testNumber-1]=testScore; }

}

**class** GraduateStudent **extends** Student{

**public** **void** computeCourseGrade() {

**int** total = 0;

**for** (**int** i = 0; i < NUM\_OF\_TESTS; i++)

{

total += test[i];

}

**if** (total >= 80)

{

courseGrade= "Pass";}

**else** {

courseGrade= "No Pass"; }

}

}

**class** UnderGraduateStudent **extends** Student{

**public** **void** computeCourseGrade() {

**int** total = 0;

**for** (**int** i = 0; i < *NUM\_OF\_TESTS*; i++) {

total += test[i];

}

**if** (total >= 70) {

courseGrade= "Pass";

}

**else** {

courseGrade= "No Pass"; }}}

**public** **class** StudentTest{

**public** **static** **void** main(String[] args) {

Student roster[]= **new** Student[2];

roster[0] = **new** GraduateStudent();

roster[1] = **new** UnderGraduateStudent();

roster[0].setScore (20, 30, 50);

roster[1].setScore (10, 17, 13);

System.*out*.println();

System.*out*.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

**int** nb=0; //=== count the number of Under Graduate Students

**for** (**int** i=0; i<roster.length; i++)

**if** (roster[i] **instanceof** UnderGraduateStudent)

nb++;

System.*out*.println("The number of Under Graduate Students = " + nb);

System.*out*.println();

System.*out*.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.*out*.println();

**for** (**int** i=0; i<roster.length; i++)

{

System.*out*.println("The name of the class is : " + roster[i].getClass().getName());

roster[i].computeCourseGrade();

System.*out*.println(" Pass or Not : " + roster[i].getCourseGrade());

}

}

}