**44-542 Object Oriented Programming**

**Classes 01**

Carefully study the definition of the Student class shown below and then answer the questions that follow it.

public class Student

{

private String name;

private int pointsEarned;

private int pointsPossible;

public Student( String nameIn )

{

name = nameIn;

pointsEarned = 0;

pointsPossible = 0;

}

public Student( String nameIn, int ptsEarnedIn, int ptsPossibleIn )

{

name = nameIn;

pointsEarned = ptsEarnedIn;

pointsPossible = ptsPossibleIn;

}

public void addScore( int ptsEarned, int ptsPossible )

{

pointsEarned += ptsEarned;

pointsPossible += ptsPossible;

}

public double average()

{

return ( pointsEarned \* 100.0 ) / pointsPossible;

}

public String getName()

{

return name;

}

}

1. What are the attributes of a Student object?
2. How many constructors are defined for the Student class?
3. What is the type of the second parameter of the second constructor?
4. Does the method addScore() return a value?
5. What is the return type of the average() method?
6. What is the signature of the addScore() method?
7. Find the output if we execute the code below:

Student s1 = new Student( "Ann" );

Student s2 = new Student( "Bill", 176, 200 );

System.out.println( s1.getName() );

System.out.println( s2.average() );

1. Find the output if we execute the code below:

Student s = new Student( "Heather" );

s.addScore( 87, 100 );

s.addScore( 19, 20 );

s.addScore( 60, 75 );

System.out.println( s.getName()

+ " has an average of "

+ s.average() );