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| Rectangle | Course |
| -Double x | -string course\_name |
| -Double y | -int capacity |
| -Double width | -string\* students |
| -Double height | -int numberOfStudents |
| + Rectangle() | -int new\_cap |
| + Rectangle(double a, double b, double c, double d) | + Course() |
| + double getX() const | + void clear() |
| + double getY() const | + string getCourseName() |
| + double getWidth() const | + void addStudent(const string& name) |
| + double getHeight() const | + string\* increase\_capacity() |
| + double setX(double a) | + void dropStudent(const string& name) const |
| + double setY(double b) | + int getNumberOfStudents() const |
| + double setWidth(double c) |  |
| + double setHeight(double d) |  |
| + double getArea() const |  |
| + double getPerimeter() const |  |
| + void contains(double x, double y) const |  |
| + void contains(const Rectangle &r) |  |
| + void overlaps(const Rectangle &r) |  |