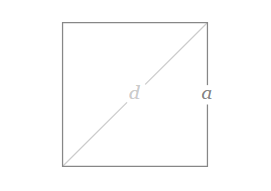
## **C#**

## Given:

1. **Square**

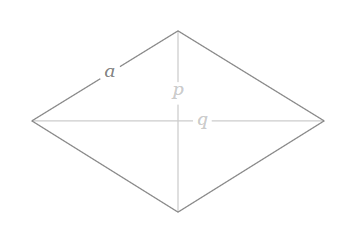
****

a = side

*Area = a2*

*Perimeter = 4a*

1. **Rhombus**

a = side

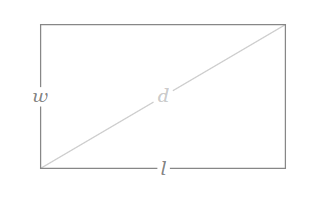
p = diagonal

q = diagonal

*Area = pq/2*

*Perimeter = 4a*

1. **Rectangle**

****

w = width

l = length

*Area = wl*

*Perimeter = 2(w + l)*

## **The task:**

Please create a console application. In the application:

1. Create a list that has all the above objects.
2. For each object in the list, print its name, area and perimeter.

C#; Object Oriented; Inheritance; Exception handling

## **LINQ**

Given: a list of students:

## 

Please write and expression that answers each question:

1. How many students came from the USA?
2. How many students are older than 20 but younger than 28?
3. What are the names of the students who learn History?
4. What are the names of the students who learn Music, but not in Mr Drum’s class?

## **SQL**

Here is a table named **Widgets**. In this table, you can see a list of websites (SiteName) and the widgets that are implemented on each website. The same widget can be implemented on the same site in different languages (Lang). Each widget maybe active (1) or inactive (0).



Please write sql queries for the following questions:

1. Show only inactive widgets.
2. Show only widgets that start with “Demo”.
3. Show only widgets that have “Registration” in their name.
4. Show all languages that the site “https://www.fxlider.com” has.
5. How many languages are there in each site? Please show a list of websites and the number of languages per each site.

## **Refactoring**

You have 3 Test methods. Each test method starts and ends the same and have only 1 method which is different. You are asked to remove duplications in the code and refactor the Test methods in a way that each of them has only one method in it. How can you solve it?

**TestMethod1**

{

string url = “www.google.com”;

OpenChromeBrowser();

NavigateToUrl(url);

SearchTheWord(“selenium”);

OpenFirstLink();

CloseTheBrowser();

}

**TestMethod2**

{

string url = “www.bing.com”;

OpenChromeBrowser();

NavigateToUrl(url);

SearchTheWord(“selenium”);

CountTheResults();

CloseTheBrowser();

}

**TestMethod3**

{

string url = “www.youtube.com”;

OpenChromeBrowser();

NavigateToUrl(url);

SearchTheWord(“selenium”);

PlayTheFirstVideo();

CloseTheBrowser();

}