

Assignment 2

Exercise 1

Describe all parts of this method:

```
public static String method(int n1, String s1)
{
    return s1 + " " + n1;
}
```

Exercise 2

Does this program compile?
If so, why? How to break it?
If not, why? How to fix it?

```
public class Test {
    public static void main(String[] args) {
        System.out.println(max(1, 2.0));
    }

    public static double max(int num1, double num2) {
        if (num1 > num2)
            return num1;
        else
            return num2;
    }

    public static double max(double num1, int num2) {
        if (num1 > num2)
            return num1;
        else
            return num2;
    }
}
```

Exercise 3

Write a program that reads n numbers and prints their average.
The program should first prompt the user to input the number of numbers. Then it should read the numbers, compute their average, and print it.

Example:

```
How many numbers:
> 3
Insert 3 numbers:
> 2.1
> 2.6
> 1

Their average is 1.9
```

Exercise 4

Write a program that reads positive numbers and prints their average. The program should stop reading new numbers when a negative number is inserted. (Note: the negative number does not count in the average.)

Example:

```
Insert numbers (terminate with negative number):
> 2.1
> 2.6
> 1
> -1

Their average is 1.9
```

Exercise 5

Write a program that simulates the Rock-Paper-Scissors game (see <https://en.wikipedia.org/wiki/Rock%20paper%20scissors> for instructions). The program should ask the player to input his choice (rock, paper, or scissors) and randomly generate the computer choice. Then, it should decide the winner and print the result.

The program should start with a welcome banner. Then, the player chooses the first letter of the element (both uppercase and lowercase letters should be accepted). The program should continue to ask for the element until a valid letter is chosen.

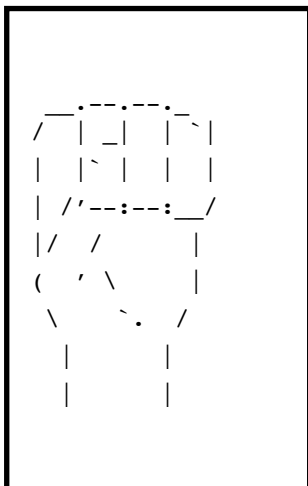
After a correct choice the program should display the player and computer choice on screen using ascii art.

Finally it should determine the winner by using the following rules:

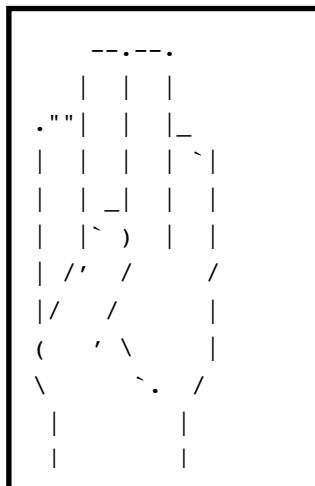
- rock beats scissors
- paper beats rock
- scissors beats paper

The usage of methods is strongly advised.

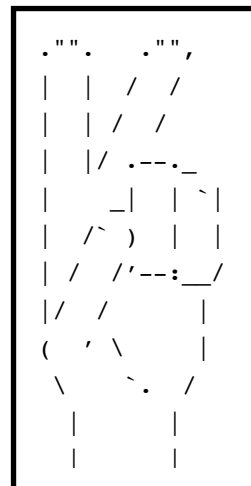
Ascii art:



Rock



Paper



Scissors

Example:

```
=====
Welcome to the Rock-Paper-Scissors game!
=====
```

Select your element:

R/r - rock

P/p – paper

S/s - scissors

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Player

Computer

Player won! (rock beats scissors)