ADDS - Practical 2: Rock, Paper, Scissors

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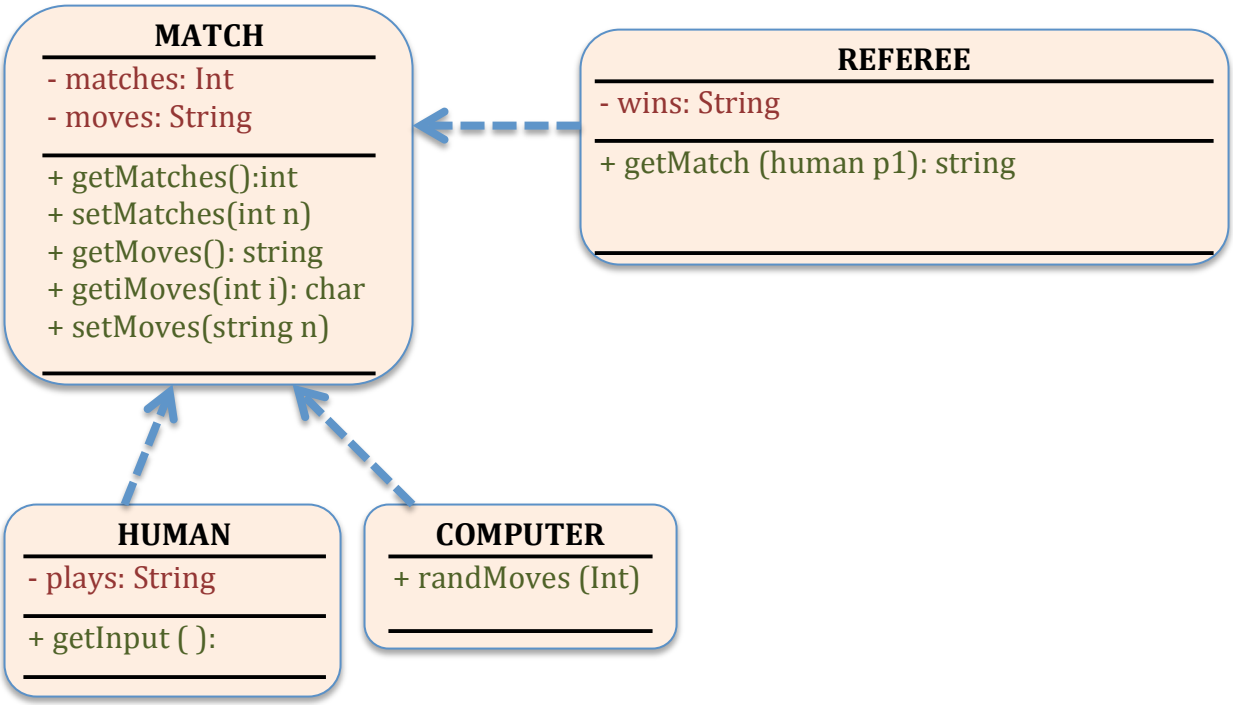
1. DIAGRAM OF CENTRAL CLASSES:



2. EXPLANATION OF CORE FUNCTION:

HUMAN:

void getInput ( ):

It will ask the user for an input and will store it in the string "plays". After that, it will store the first integer in "numbers" and then letters in the string "moves". It will check the coherence between the number of matches given and the number of letters, and that the letters match with S or P or R.

COMPUTER:

void randMoves (int m):

For this practice, this function will fill the string "moves" of the computer player m times with "R". The m int will be the output of the funtion getMatches of the human player, what will be the first number in the string plays.

REFEREE:

string getMatch(human p1)

If the input didnt check (matches = -1) the funtion will print "not valid input".

If the input chech, it will match every position of the string moves of the player1 with the string moves of the player2 using a loop from 0 to m, that will be the first number in the string plays. The result of every match will be store in the wins string. And finally it will be print the results with the spaces.

Main:

The main function for this program, created a human object and call the getInput funtion of it. Then created a computer player and call the randMoves funtion with the int matches as parameter. And finally a referee is created and the getMatch funtion of this object is called, which will print the results of the match.

3. TESTING: Following is a description of the test cases that will be used to test my program.

Given input	Rationale	I expect output
3 S P R	Test the example input giving in the practical.	**L W T**
4 R R P S	Test the second example input giving in the practical.	**T T W L**
2 S P R	Test that the program is checking the coherence between the number of matches given and the number of letters for that matches.	"Not a valid input"
3SPR	Test that the program is checking for the spaces between the characters.	"Not a valid inpu
S P R	Test that the program is checking for a number in the first position.	"Not a valid input"
3 2 3 P	Test that the program is no taking for input numbers after the first position.	"Not a valid input"
3 F H V	Test that the program is no taking for input different letters that S P R.	"Not a valid input"
5 P P R R S	Test the output of a long input	**W W T T L**
10 P R S S R P S P R R	Test the output of a very long input	**W T L L T W L W T T**