# Mock Test2

NAME, SURNAME, STUDENT ID (IN CAPITAL LETTERS): ……………………………………………………………………………………………

**Create programs in files with the names given in parentheses at the beginning of each task. If you use other names, you will not receive points.**

**Each function has a name f(). If you use a different name, you will not receive points.**

(p1.py) The playing cards have the following values: Ace (A), King (K), Queen (Q), Jack (J) and 10 (T) have a value of 10 each. The other cards have the value indicated by the card number. Create a function f(player1,player2) that returns true if the first player has cards of the same or higher value, and false otherwise. Example:

f("AJ972","AQT72") 🡪 False  
f("9532","K8") 🡪 True

(p2.py) An array contains at least 3 integers. All numbers in the array are equal except one. Create a function f(arr) that returns a number in the arr array that is different from the other numbers. Example:

f([7,7,7,7,7,5,7,7]) 🡪 5

(p3.py) A two-dimensional array contains the same number of rows and columns. Create a function f(array2D) that, for the given two-dimensional array array2D, returns True when the sum of the values in each row of the array is equal to the sum of the values in the corresponding column (e.g., the sum of the values in row 3 is equal to the sum of the values in column 3) , and False otherwise. Example:

f([[3,7,2],[4,2,5],[5,2,1]]) 🡪 True  
f([[3,7,2],[4,2,5],[9,2,1]]) 🡪 False

(p4.py) The dictionary contains the names of subjects and the grades obtained. Create a function f(subjects) that, for the given subjects and their grades, returns the name of the subject for which the average grade is the highest. Example:

f({"math":[3,4,4],"geo":[5,4,4,4],"comp":[5,4]}) 🡪 "comp"

(p5.py) Create a function f(first\_letter,last\_letter) that, for the data.txt file, returns the number of words that start with the first\_letter and end with the last\_letter. Example:

f("w","d") 🡪 compare your result with other students

(p6.py) Create a function f(years, course) that, for the data.json file, returns the number of students who are at least the given number of years and have a grade average of at least 4 in the given course name. Example:

f(21, "statistics") 🡪 compare your result with other students

(p7.py) A valid username consists of 4 to 12 characters: lowercase letters, numbers and the underscore character. Create a function f(arr) that, for a given array of usernames, returns the number of valid usernames in the array. Example:

f(["uek","water\_7\_x","anna.may","a\_b\_c\_d\_e\_f"]) 🡪 2