

Development of the Support System for Analysis of the Correlation Psychological Characteristics and Signature Properties

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Abstract—Project is focused on analysis of the correlation psychological characteristics and signature properties of person. Our goal is to propose method to find the correlation between psychological properties and signature of person. This paper summarizes the progress after first phase of our project.

Keywords—psychological, signature, analysis, data mining

I. INTRODUCTION

The main reason, why we decided to work on this project is that everybody can clearly say a many features of his psychological character. In most cases people are not objective and unbiased. This fact is used in graphology. Graphology provides analysis of psychical character of person and patterns of a handwriting text to be able to make evaluating of personality characteristic. In our case, patterns of a handwriting text are signature of persons. The field of signatures is not very described. Lots of graphologists mean that analysis of signature is not sufficient [1 – 3]. It is the reason why lots of them are focused on handwriting text and signature together. A few authors who are attended on only signature are not in some definitions very clear but basically the field is not very explored. Importance of analysis of signature is noticeable especially in companies, which use to do this analysis during a job interview. Next important usage can be in medicine. For example, the system can be able to detect a stressed surgeon.

II. SUGGESTED SOLUTION

The main aim of our project is finding to penetration of different graphologist meanings and find new context. The next important goal of the project is find some psychical properties and assign it to the signature properties. In final, we want to develop system, which takes signature of user, analyze the signature and after analysis it will be possible to show results to the user. Displayed result informs the user about his psychological characteristic and it can estimate the current state of person. For instance, current state can determine whether the user is angry now. Diagram in Fig.1 shows process from start to end.

At start we had to create tests. Tests are divided into two categories. First category is for psychological tests and the second one is for tests focused on signature. We had to make own psychological test, because the current legislation in this field of psychology is very strict and using of validate tests is charging. We assume, that our test get validate results too.

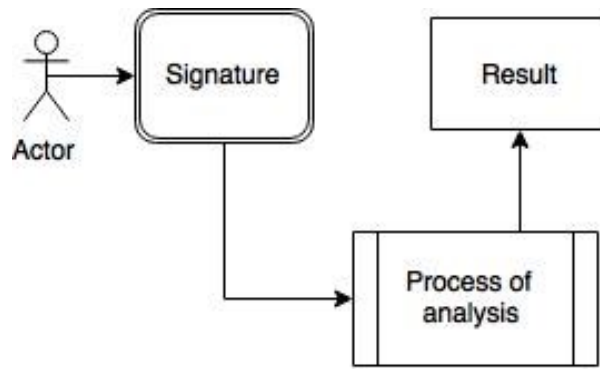


Fig. 1 Diagram of process

At first of all, we create the test which contains 167 questions. Questions in the test are separated in two groups. First group is focused on graphology and second group is focused on psychology. We try to collect a many results. According to the results we want to make the study. In study we want to find some correlation between psychological part of the test and graphologist part. We create a web page for collecting data. All results from tests are saved in database. Our page is written in PHP. Users can look into the help during the test. We used JavaScript for showing the help. The help explain some technical terms about signature. For explanation of terms, we used pictures. The page has responsible design. Our project includes two main *php* files. The first file is necessary for visualization of the questions and answers. The second file is for processed the test form.

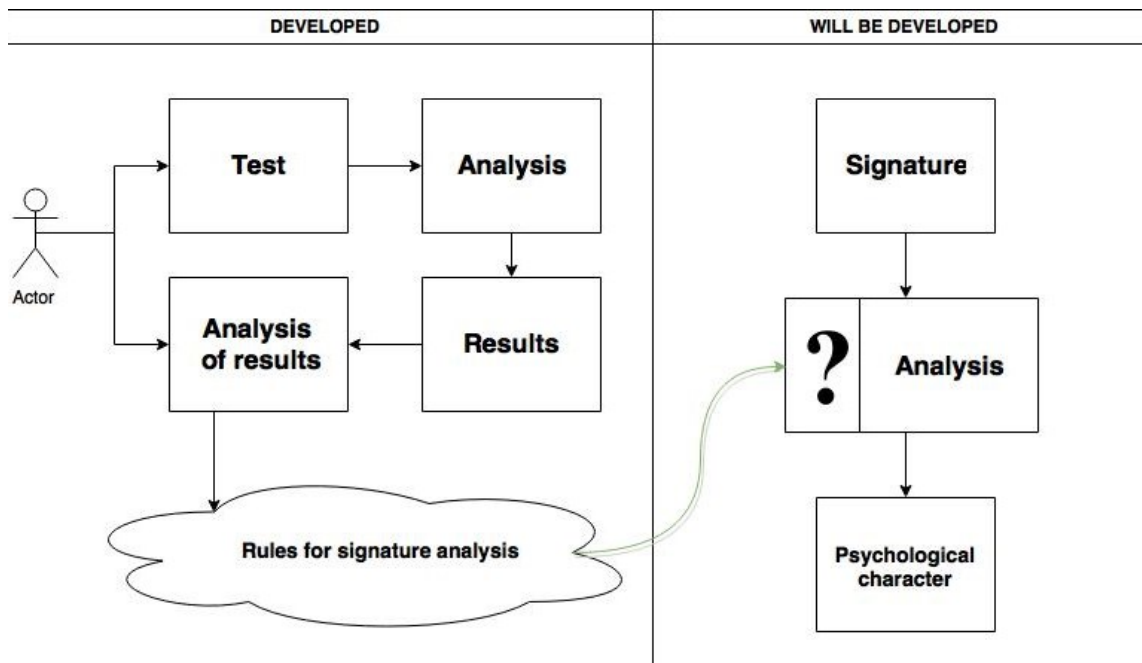


Fig. 2 Diagram of functionality and progress of development

III. DATABASE DESIGN

All necessary information is stored in database. We used *MySQL* database. Database contains 9 tables. Database scheme is shown in Fig.3.

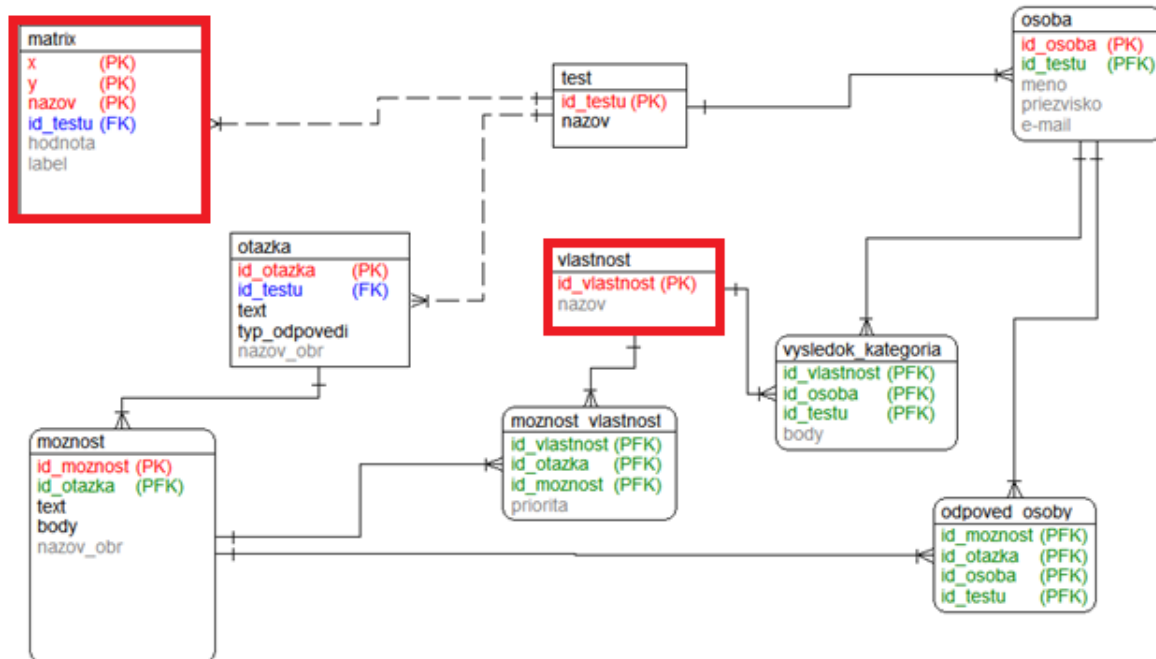


Fig. 3 ERA-model demonstrate the dependencies of entities. Selected tables are used for estimate psychological character of person.

Table *otazka* include all questions and according to attribute *id_testu* we can assign every question to the test, because every kind of test has own unique id number of identification. Tests are stored in table named *test*. All questions in test have assigned answers. Answers are stored in table named *moznost*. The main aim of tests is find some mutual psychological and graphological features of the person. These features are stored in table named *vlastnost*.

Users have to fill answers of questions. After click on confirm button the system creates a new record in table *osoba*. Then answers are stored in table *odpoved_osoby*. Next important event after on-click method is computes result of all categories of the psychology test. These results are stored in table *vysledok-kategoria*.

IV. CONCLUSION

In first phase of project we suggest system for collecting data and we proposed simple structure of our system. At next phase we can use collected data for analysis of person characteristics.

The presented result has been developed under special subject "Project" at the Faculty of Management Science and Informatics of University of Zilina (Zilina, Slovakia).

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