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Intelligent Tool for Construction and evaluation of Business plan

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Abstract

While extending the scope of courses taught at department of computer sciences, a new course "Information Systems for E-business" was launched. During this course, students were constructing their own business plan and later put it into practice using information and communication technologies. During the course a problem has arisen, as some of the students did not know how to design financial calculation, define starting and continuous costs and other related problems. This led to designing a concept followed by implementing application for business plan construction, which goal is to help students (as potential beginning businessmen) to formulate their aim and evaluate practicability of their financial expectations. Application underwent a testing run, during which many feedback reactions were gathered, that may contribute to its further development. This paper discusses basic requirements on functionality and extensibility of the application and compares it to the existing professional tools in this field.

1 Introduction

This paper describes building of a tool for creation of structure documents focused on e-commerce. Many commercial tools and discussion groups covering this topic exist today (e.g. tools from PaloAlto Software company - Business Plan Pro, Sales and Marketing Pro). In Czech Republic however, only a limited amount of such resources is available as managed websites Czech Invest, BusinessInfo and similar. One could also use patterns of exemplary documents, or whole business plans, yet a tool allowing interactive approach is still missing and tools created abroad do not always meet the Czech market philosophy and/or its online version.

During the lecturing of the Information Systems for E-business course a request arose for an application allowing students to create documentation in unified form. This included foundations for business plan creation, marketing plan, product mixing, sales plan etc. After the first year of teaching the course it became apparent that each student has a different approach to creating of documentation, their outcomes differ in detailedness significantly, and thus are incomparable. The application was required to enable construction of detailed patterns for particular documents, to define their required fields, to design tables with predefined calculations upon entered data and to provide visualization of the results in form of graphs and reports. It should also allow supplementing with application modules, which would be able to work upon entered data. The outcome of the application is a document, exportable to a form suitable for printing. [1.]

2 Requirements for the structured document designing

The application was designed to run under Microsoft Windows operating system. A lightweight web version of the application is currently under development and should follow the basic functionality, while being available to even wider number of users

.1 Form designer

One part of the application is the form designer. This tool allows creating document shape, to define required fields, structure of input data as text fields, formatted text fields, numbers, tables and multimedia content. It also allows to create a wizard, guiding the user though through the input areas, commenting on expected input, its meaning in the scope of the document and appropriate (or admissible) values. This wizard does not have to follow the structure of the document, i.e. it can lead through the fields in a different order, than they are arranged in the document hierarchy. The wizard can also acts for a lecturer by going over on the related study matter and commenting on the chosen input. Furthermore it allows to set "business rules", that will suggest the values for some fields on basis of already entered information.

2.2 Module for pattern filling

Inseparable part of the whole solution is the tool for filling the patterns. The tool allows lecturer to set few exemplary solutions of particular document. Thus the student does not have to create the whole document from the beginning, but can simply modify the exemplary pattern. The pattern can also be provided with further comments for particular exemplary case. To one type of structured document, any number of patterns can be created.

2.3 Document evaluation tool

Another module is tool allowing evaluating created documents. The documents here are structured, in which there are specifically predefined fields, and that allows fol automatic evaluation. For example, when designing structured document for business plan, one can define analyzing fixed and variable expenses, sustainability of the whole project, sufficient number of annotations and many more.

This module also allows the lecturer to set evaluating criteria for the final documents, so that it is possible to automatically rate them. [2.]

Form designer → Module for pattern filling → Document evaluation tool

3 User interface

Student or other user, who wants to work with the application, can choose from a number of offered documents after starting the application (Fig. 2). [3.]

Each of those documents has different parts, different methods of specification and evaluation. User can fill the document pattern in three possible ways: Sequentially going through the document Using the wizzard Modifying existing document pattern Application is trying to be as close as possible to the MS Office user interface. For that reason it is not necessary to create an user interface chapter in user documentation. It is also prepared to be employed in multi-language environment, offers spellchecker and other tools making it easier to use.

3.1 Publishing and presenting the outcome

Application allows exporting all the entered content into one document, just as it allows creating single document for every filled pattern. It can also create a basic structure for the presentation of the project. [4.]

This set of desired outcomes was defined with especially homogeneity and comparability in mind, as the students are provided with unified materials during the course.

3.2 Document comparison

There is a tool available, allowing to compare two or more projects on the basis of chosen methodology. This is not only to be used by the lecturers, but also by students, who can prepare more versions of the projects and then compare them together, getting to know which is the most appropriate one. Following methodologies are currently supported.

Document content for evaluation			
Timetable for project implementatin	SWOT analysis	Cash-Flow	Landing, Insurence, Taxes

4 Further utilization possibilities

Described application aims to facilitate students' orientation when composing complex business and marketing plans. It can be further extended, especially in field of project management and by adding more document patterns.

It provides results in unified form, which, except for the aforementioned gains, brings also drawback of seeing the results as plagiarisms from the pedagogical point of view, when student uses existing pattern, slightly modifying it for his needs. On the other hand however, it can be viewed as an asset, because the student, who is novice in the field, does not have to thoroughly understand all the business planning details of the project.

### 4.1 Internal grants evidence

Another interesting field of application's use lies in possibility of defining one's own patterns for evaluating grant applications created for example in Intelligent Forms software from Software602 company. Both structures of the document and evaluating methodology (such as formal requirements, measurable criteria evaluation, etc.) can be defined.

4.2 Quality management system support

It is also possible to put described application into effective use in field of quality management system, internal directives, revision control of documents and further such.

4.3 Conversion of structured documents

An interesting property of the application is its ability to convert the structured documents. For example form innovation, conversion of its content into different structure, calculation and derivation of values, which can be used to create another document.
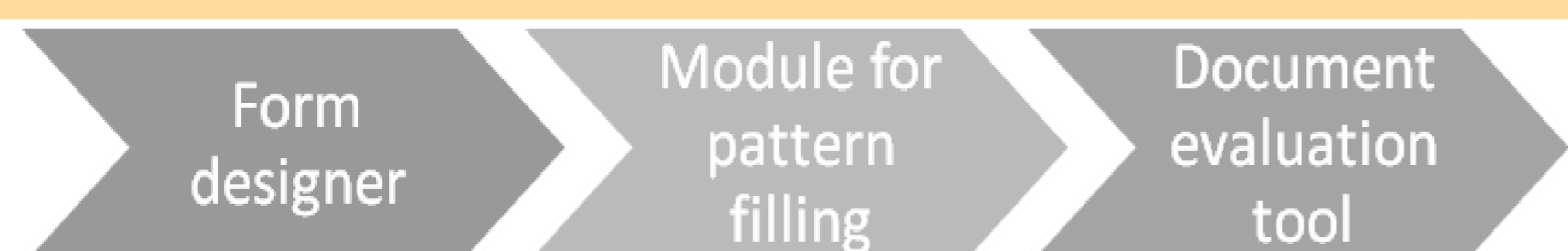
Conclusion

The implementation of the desktop application is currently under testing and will be put into operation during education. Further possibilities of extending the application's current abilities by the web interface (which relates with document sharing) and by adding more types of structured documents and evaluation, comparing and conversion possibilities are being prepared. Once the online version of the application is connected to the database, the whole application can be used for designing, filling and evaluating complex questionnaires and statistics. Therefore it can be applied in both academic and commercial sector.