

CASE STUDIES

Waypoint Case Study

VELOCITY^{K4}

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Using Waypoint to analyse and utilize the vast amount of data to more effectively implement an academic program

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About Velocity^{K4}

Velocity^{K4} is a software development start-up specializing in web-based technology solutions for educational institutions. The technology solutions provided by the company are data-driven outputs with long term predictors. The product is built on the .NET framework with an HTML5 and JavaScript frontend.

Problem

Our product generates large amounts of statistical data and reports, such as course evaluations, student performance data, attendance statistics, etc. The product also correlates the data to provide short term and long term predictors. Our customers need the ability to generate easy to read reports quickly and easily from a web-based interface, and those reports must be provided in both editable Microsoft Word DOCX and a read-only PDF formats.

Initially, we experimented with using Microsoft Office automation, but quickly determined that relying on the Microsoft Office object library at the server level for each of our clients wasn't a desirable solution.

Solution

Aspose.Words output of the DOCX met our need to export to DOCX in order to create documents easily editable outside of our platform. In academia, DOCX is one of the most widely used document formats available. Providing a standard, editable, known and easily editable was a must. Additionally, the simplicity of Aspose.Words to export to a PDF in a single line of code was an enormous bonus. Our clients desired read-only distribution of these reports, such as course evaluation data for faculty, student performance data for individual students, attendance reports, etc.

Course Evaluation Report

Sample Output Class
 7000-000
 Spring 2016

Course Mean: 3.75
(all question means combined)

1. The advisors at the group meetings listened to student questions and concerns and provided helpful information to address those questions and concerns.

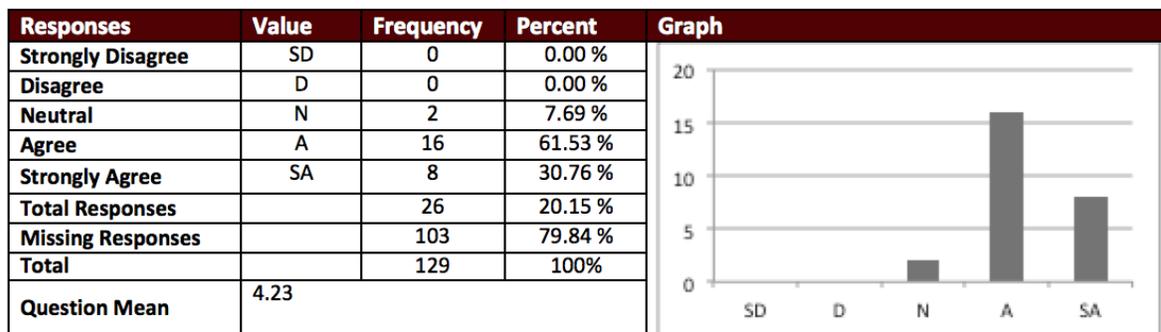


Figure 1: Screenshot of Aspose.Words created report output

Experience

Finding a solution: We explored a number of other products over a period of several months. This included TextControl, GrapeCity ActiveReports, iText, and ComponentPro. We really liked the idea of TextControl and ActiveReports, which allow users to completely customize the layout and content of their reports through a web interface. We had begun with the assumption that our customers would want the ability to fully customize their reports but, as we worked with those customers, we learned that most of them weren't as interested in layout control as we had anticipated. For the most part, they wanted predefined reports with the ability to add their organization's branding. For our customers, simplicity and ease of use are valued much more than extensive customization. What we really needed then was Word automation without Word. This is when we began exploring iText, ComponentPro, and Aspose.Words.

Implementation: Using the Aspose.Words API our users can easily select a generic predefined template, customize branding and report title, then simply click a button to output the report. In essence, they can generate a report with very little effort and export to the best formats for distribution quickly and easily. This is exactly what we needed and Aspose.Words does this very well.

Outcome: After evaluating each of these solutions, we determined that Aspose.Words was the best fit for our needs based the API's stability, feature pack, licensing options, and excellent technical documentation to aid our development team in implementing it into our product.

Next Steps

As our product develops, we plan to continue to implement Aspose.Words as a key feature in our offerings. We also plan on exploring Aspose.PDF for pdf annotation.

Summary

Aspose.Words provided everything we needed in a single API. First we need to dynamically generate reports from statistical data from within our program. Aspose.Words allows us to automate the completion of predefined templates with the single click of a button. The ability to simulate Microsoft Office Automation, without the need for the Microsoft Office object library, provides a quick and stable method of creating dynamic documents on demand.