FRESHCODE
We make ideas happen

Skype: alex.freshcode
Email: estimation@freshcodeit.com

Site: www.freshcode.com
Phone: +38 (063) 256 63 78

Twenty One Learning

Client: Twenty One Learning

Client Site: twentyonelearning.dk

Industry: Education

Country: Denmark

Size of the Team: 12 people

Duration: 10 months

Technologies Used:

JAVA	ACTION SCRIPT	DYNAMO DB	APACHE THRIFT
TEAMCITY	AWS ELASTIC BALANCER	KIBANA	HAZELCAST
RIEMANN	AMAZON EC2		

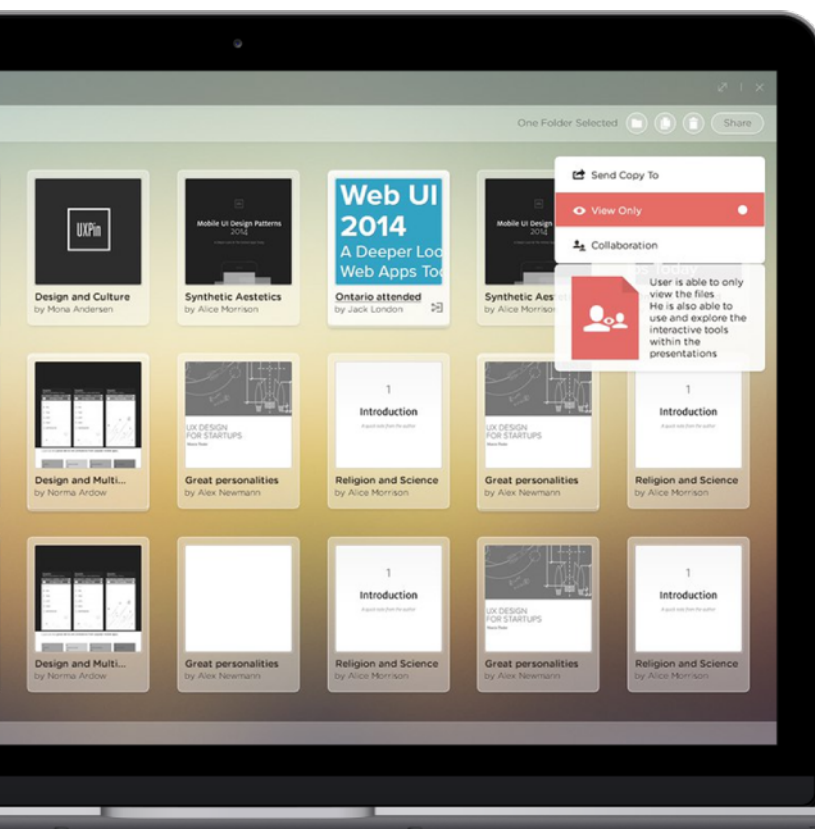**TWENTYONE. LEARNING**

OUR CLIENT

Twenty One Learning interactive platform is an educational project, similar to Google Docs and Google Presentation. It is a convenient tool for educators that makes it easier for teachers to provide interesting, interactive lesson materials: text, slides and lectures, supports collaborative creation and import of educational materials from PDF files. Two work modes allow teachers to prepare lesson materials in editing mode and students to access them in a read-only mode when needed.

FRESHCODE
We make ideas happen

Skype: alex.freshcode
Email: estimation@freshcodeit.com

Site: www.freshcode.com
Phone: +38 (063) 256 63 78

BUSINESS ISSUES

The main objective of the project was to allow collaborative creation of lectures, presentations, slides and text with open access to all materials. At the same time client required PDF, audio and video support.

Twenty One Learning wanted to allow simultaneous editing for up to 100 people while presentation download time must not exceed 3 seconds. The platform was required to support a simultaneous load of 100.000 users. The client also wanted the ensured functioning of the product on the Amazon Web Services (AWS) cloud server solution with a possibility of the infrastructure scaling.

FRESHCODE
We make ideas happen

Skype: alex.freshcode
Email: estimation@freshcodeit.com

Site: www.freshcode.com
Phone: +38 (063) 256 63 78

SOLUTIONS

All the requirements of our client were met. We were responsible for the development of a unique module: Java Implementation of Operational Transform that allowed simultaneous text editing by several users. An original framework for the PDF files import was developed for the project.

We developed InMemory Cash mechanism, which decreases costs of the Amazon DynamoDB upkeep, enhanced and upgraded Apache Thrift protocol to provide communication between client-server and client apps. Action Script was also enhanced and upgraded with an added Framed Transport support. Additionally we developed a load tests software suit. It deploys 10 copies of the variable capacity, uploads and starts client applications for a load testing, gathers statistics, aggregates it, creates graphs and reports.

BUSINESS VALUE

At first TwentyOne Learning was but a start-up, but it is currently almost ready for a full-scale launch. Educational platform was first revealed at the Bett 2015 expo, where TwentyOne Learning received positive feedback and got several partnership offers. Talks with LearnPad Company are now in progress regarding the plans to preinstall the platform tablet PCs.