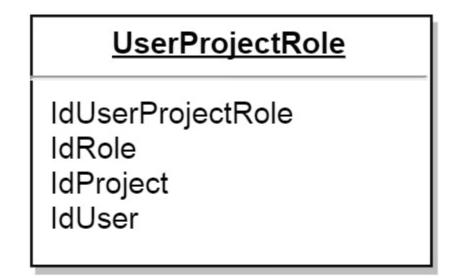
UML to JSON parser

Tool for importing image of UML objects and retrieving their JSON description



TimeSheetHour

IdTimeSheetHour

IdTimeSheet

IdTimeCategory

IdProjectManager

IdUser

IdTask

Quantity

Description

CreatedAt

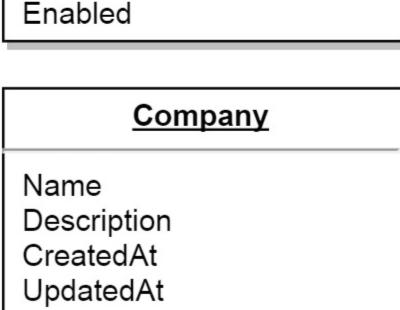
UpdatedAt

Enabled

Any image from draw.io schema can be used

Role IdCompany Name Description CreatedAt UpdatedAt Enabled

For better results, we use white background in our entities, and no background grid



<u>Role</u>

int: IdCompany

string: Description

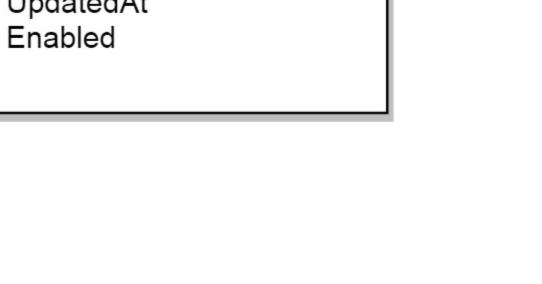
datetime: CreatedAt

datetime: UpdatedAt

string: Name

bool: Enabled

Relations between tables are not supported by UTJ



AForge.NET library is used for table extraction from the diagram image



<u>Tasks</u> <u>Calendar</u> int: IdCalendar int: IdTask string: Name int: IdCompany string: Name string: Description int: Description string: Work datetime: ValidUntil int: IdProject datetime: CreatedAt datetime: StartDate datetime: UpdatedAt datetime: EndDate bool: Enabled datetime: CreatedAt datetime: UpdatedAt

UserProjectRole

int: IdUserProjectRole

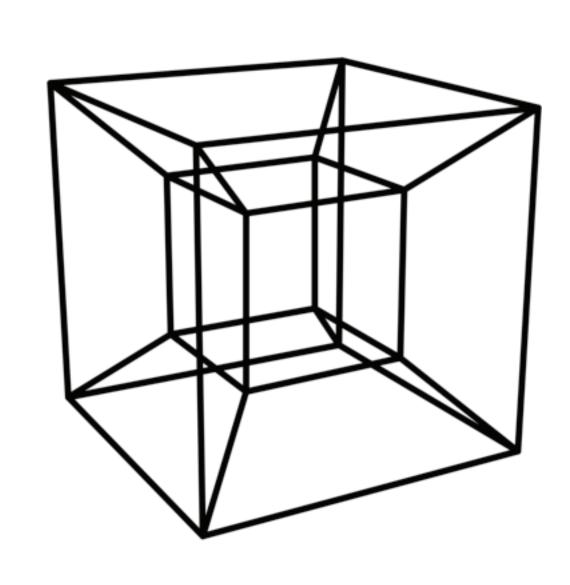
int: IdRole

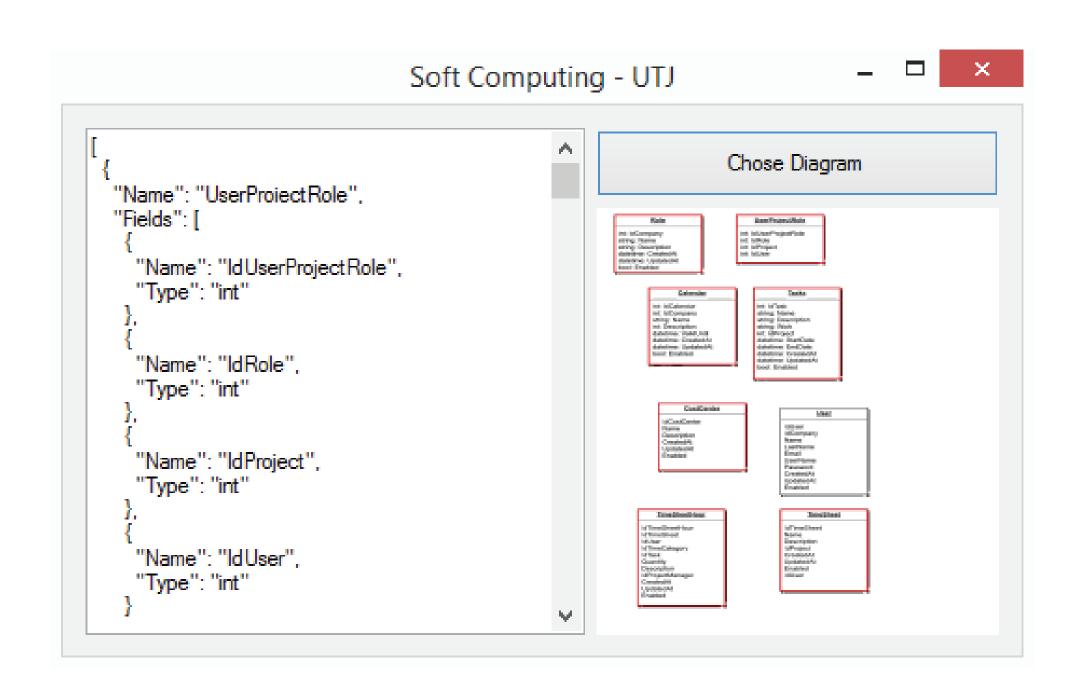
int: IdUser

int: IdProject

Each image is pre-processed with Grayscale and Bradley Local Thresholding filter, both provided by AForge.NET

Every table is separately processed by Tesseract library. Pretrained software extracts the text from the image and formats it as JSON.





As a result, we have a software with a 86,7% precision with tests performed on 40 test images.

As a validation method, we check number of recognized entities, number of recognized columns and accuracy of entity and column names.