

# Technical documentation

## ***Objects and custom fields***

Only standard objects were used, and custom fields were added into them:

1. Quote: to store the complete information of the tuition including subjects, total discount and total price to pay.

Custom fields:

- a. Partial\_Payment\_\_c (Currency): used to store the partial payment to display the dates to and amounts to pay the tuition.
- b. Payment\_Method\_\_c (Picklist): used to store this two options to pay, either monthly or payment in full.
- c. Scholarship\_options\_\_c (Picklist (Multi-Select)): used to store the names and percentages of all the requested scholarships.

Relations with other objects:

- a. Has a Master-Detail relationship with opportunity
- b. Acts as the child in the Lookup relationship with Contact
- c. Roll-up summary (Quote Line Item), used to count how many quote line items it is related.

2. Opportunity: used to store the quotes of the students and no custom fields were made.

Relation with other objects:

- a. Acts as the parent of Quote in the Master-Detail relationship.

3. Contact: used to store the student's information.

Custom fields

- a. Average\_\_c (Number): used to store the student's current average.
- b. Period\_\_c (Picklist): used to store the preferred period of the student to take his classes, either quarterly or in a semester.
- c. State\_\_c (Picklist): used to store the state where the student lives can be either of the following: Guanajuato, Nuevo León, Jalisco or Querétaro.
- d. Identifier\_\_c (Auto number): used to store a unique identifier for the student with the format EST-00000.

4. Quote Line Item: used to join a Product or in this case a university subject with a Quote and no custom fields were made. From here is where I obtain the individual university subjects prices and discounts.

Relation with other objects

- a. Child in a lookup relationship with Product, or in this case it is considered the university subject.
- b. Child of Quote in a Master-Detail relationship with Quote.

5. Product: used to store the name of the university subject and no custom fields were made.

Relations with other objects

- a. Parent of Price Book Entry and Quote Line Item, both in a lookup relationship

6. Price Book Entry: used to join a Product or university subject with a Price Book and no custom fields were made. In this objects is where the price of each Product or university subject is set.

Relations with other objects

- a. Child of Price Book and Product, both in a lookup relationship.

7. Price Book: used to store the name of the different university campuses, and no custom fields were made.

Relations with other objects

- a. Parent of Price Book Entry in a lookup relationship.

## ***Validation rules***

### ***Contact***

1. A validation rule in the Contact object was set to only permit to enter an average that was in the range from 0 to 10, this is set to the Average\_\_c custom field.
2. There is a check that verifies that the Average\_\_c custom field is not null since it is used in another validation rule to check if the student is eligible for the Excellence scholarship
3. Finally, a check to validate that the Email field is not empty since this is used to send the student an email with the quote of the enrolled subjects.

## ***Quote***

1. There is a check that validates that if the average of the related contact that is the student is below 9.5 then it is not possible to add the Excellence scholarship in the Scholarship\_options\_\_c custom field.
2. There is a check that validates that the contact lookup field is not null since this is used to look for the related contact's email to send the tuition or quote generated in a pdf file.
3. Finally there is a check that validates that the payment method is not null since this is used to calculate the partial payments for the quote.

## ***Triggers***

1. updateQuoteLineItems: this is an after update of the Quote object trigger that handles several functions, the main ones are the following:
  - a. Calculation for the discounts of the enrolled subjects based on the different criteria, for example: if one subject is enrolled then 0% discount is applied, else if two subjects are enrolled then the first one has 0% discount and the second one is applied a 10% discount, else if three or more subjects are enrolled then the first one has a 0% discount and the rest have 15% discount. Also depending on the scholarships: if excellence or sports scholarships are selected then for each there is a 10% discount (Excellence scholarship is only applied if the student has an average of 9.5 or higher), related teachers and economic need scholarships each gives a 30% discount.
  - b. Also there is a check that validates that the sum of discounts does not exceed 60% or else automatic adjustments will be made like deleting subjects, reverting payment method from payment in full to monthly or reversion from added scholarships to the past scholarships before the discount was more than 60%.
  - c. This trigger also handles a call to a function in a another class called EmailPDFController where the quote's PDF file is created, stored in the organization's Quote Document object and also sent to the student's email.
2. CheckChangeInAverage: this trigger makes sure that whenever the average of the student is changed to be below 9.5 then it automatically removes the excellence scholarship if the student has it.

## ***User interface***


**Student page (this is the Contact page but the label was changed to student)**

### New Student

\* = Required Information

#### Contact Information

Contact Owner

 Hector Rafael Alvarez Aceves

\* Name

Salutation

--None--

First Name

Oliver

\* Last Name

Thome

Account Name

Search Accounts...

Title

Department

Birthdate

04/11/1967

Reports To

Search Students...

Lead Source

--None--

Average

9.5

\* Period

Quarterly

\* State

Nuevo León

Identifier

Phone

5534896607

Home Phone

Mobile

Other Phone

Fax

Email

hecrafalac@hotmail.com

Assistant

Asst. Phone

#### Address Information

Mailing Address

Mailing Street

Cancel

Save & New

Save



Student  
**Oliver Thorne**



Title

Account Name

Phone (2) ▼

5534896607

Email

hecrafalac@hotmail.com

Contact Owner

[Hector Rafael Alvarez Aceves](#)

Related

**Details**

Contact Owner

[Hector Rafael Alvarez Aceves](#)

Phone

5534896607

Name

Oliver Thorne

Home Phone

Account Name

Mobile

Title

Other Phone

Department

Fax

Birthdate

04/11/1967

Email

hecrafalac@hotmail.com

Reports To

Assistant

Lead Source

Asst. Phone

Average

9.5

Period

Quarterly

State

Nuevo León

Identifier

EST-00001

Mailing Address

Other Address

Languages

Level

Created By

[Hector Rafael Alvarez Aceves](#), 17/11/2024, 17:21


Last Modified By

[Hector Rafael Alvarez Aceves](#), 17/11/2024, 17:21

Description

**Subject with different prices (this is the Product page but the label was changed to Subject)**

**The standard price book is actually never used but it has to be added in order to have custom price books**

 Subject


**Data Structures And Algorithms**

Subject Code

Subject Family

Related

Details

 **Price Books (5)**

Price Book Name	List Price
<a href="#">Standard Price Book</a>	\$15,000.00
<a href="#">Guanajuato</a>	\$17,000.00
<a href="#">Nuevo León</a>	\$18,000.00
<a href="#">Jalisco</a>	\$13,000.00
<a href="#">Querétaro</a>	\$15,000.00

## Opportunity with Quotes

Trailhead

Search...

★

+

🏠

?

⚙️

15

👤

Playground Starter

Welcome

Install a Package

Get Your Login Credentials

\* My Contacts


\* Oliver university enrollme...

\* More

👑 Opportunity

**Oliver university enrollment**

Created: 05/01/2025

Opportunity Owner:  Hector Rafael Alvarez Aceves

+ Follow

Edit

New Case

New Note

Qualification

Needs Anal...

Value Prop...

Id. Decision...

Perception ...

Proposal/Pr...

Negotiatio...

Closed

✓ Mark Stage as Complete

Activity

Details

Chatter

📞 Log a Call

📋 New Task

📅 New Event

✉️ Email

Filters: All time • All activities • All types

Refresh • Expand All • View All

Upcoming & Overdue

No activities to show.  
Get started by sending an email, scheduling a task, and more.

No past activity. Past meetings and tasks marked as done show up here.

Related

📄 Subjects (0)

📎 Notes & Attachments (0)

👤 Contact Roles (0)

🏢 Partners (0)

📅 Stage History (1)

Stage: Qualification  
Amount: \$0.00  
Probability (...): 10 %  
Expected Re...  
Close Date: 05/01/2025  
Last Modifie...: [Hector Rafael Alvarez Aceves](#)  
Last Modified: 17/11/2024, 17:32

View All

📄 Quotes (1)

00000010  
Quote Name: Oliver semester 5  
Syncing: ☐  
Expiration ...

View All

***Selected subjects (this is the Quote Line Item object but the label was changed to Selected Subjects)***

Quotes > Oliver semester 5

Selected Subjects

Add SubjectsEdit Subjects

3 items • Sorted by Sort Order • Updated a minute ago

	Subject	Sales Price	Quantity	Subtotal	Discount (Percent...	Total Price	List Price
1	Artificial Intelligence	\$18,000.00	1.00	\$18,000.00	10.00 %	\$16,200.00	\$18,000.00
2	Data Structures And Al...	\$18,000.00	1.00	\$18,000.00	25.00 %	\$13,500.00	\$18,000.00
3	Quality Assurance In S...	\$18,000.00	1.00	\$18,000.00	25.00 %	\$13,500.00	\$18,000.00

***Quote with total discount applied***

Quote

Oliver semester 5

New

Quote Number

00000010

Expiration Date

Syncing

☐

Opportunity Name

[Oliver university enrollment](#)

Account Name

Grand Total

\$43,200.00

Draft

Needs Review

In Review

Approved

Rejected

Presented

Accepted

Related

Details

Quote Number

00000010

Expiration Date

Quote Name

Oliver semester 5

Syncing

☐

Opportunity Name

[Oliver university enrollment](#)

Status

Draft

Account Name

Description

Payment Method

Monthly

Scholarship options

Excellence - 10%

Partial Payment

Totals

Subtotal

\$54,000.00

Discount

20.00%

Total Price

\$43,200.00

Tax

Shipping and Handling

Grand Total

\$43,200.00



## Quote is sent for approval

Quote

Oliver semester 5

Quote Number

00000010

Expiration Date

Syncing

☐

Opportunity Name

[Oliver university enrollment](#)

Account Name

Grand Total

\$43,200.00

✓

✓

In Review

Approved

Rejected

Presented

Related

Details

✓ Selected Subjects (3)

Subject	Sales Price	Quantity
<a href="#">Artificial Intelligence</a>	\$18,000.00	1.00
<a href="#">Data Structures And Algorithms</a>	\$18,000.00	1.00
<a href="#">Quality Assurance In Software</a>	\$18,000.00	1.00

View All

✓ Quote PDFs (0)

📎 Notes & Attachments (0)

Upload Files

Or drop files

Submit for Approval

Comments

Please review this quote for Oliver

Cancel

Submit

Playground Starter

Welcome

Install a Package

Get Your Login Credentials

\* My Contacts

\* Oliver Thorne | Student

\* Recently Viewed | Subjects

\* Oliver university enrollme...

\* Oliver semester 5 | Quote

\* Recent

Quote

Oliver semester 5

Quote Number

00000010

Expiration Date

Syncing

☐

Opportunity Name

[Oliver university enrollment](#)

Account Name

Grand Total

\$43,200.00

✓

✓

In Review

Approved

Rejected

Presented

Related

Details

✓ Selected Subjects (3)

Add Subjects

Edit Subjects

Subject	Sales Price	Quantity	Subtotal
<a href="#">Artificial Intelligence</a>	\$18,000.00	1.00	
<a href="#">Data Structures And Algorithms</a>	\$18,000.00	1.00	
<a href="#">Quality Assurance In Software</a>	\$18,000.00	1.00	

View All

✓ Quote PDFs (0)

📎 Notes & Attachments (0)

Upload Files

Or drop files

Submit for Approval

\* Choose Next Approver

Hector Rafael Alvarez Aceves


Cancel

Submit

Approval History (0)


### ***The approver, the career coordinator, needs to approve the quote***

This approval makes the “Status” field of the quote to change to “Approved” which triggers the calculation of the custom field “Partial payment” which then triggers the creation of the pdf file that is stored in the Quote’s PDFs and is also sent to the student’s email.



Search...

Playground StarterWelcomeInstall a PackageGet Your Login CredentialsMy ContactsOliver Thorne | StudentRecently Viewed | SubjectsOliver university enrollme...Oliver semester 5 | Quote

Approval Requests

Items to Approve

1 item • Sorted by Date Submitted • Filtered by requests assigned to me and my queues • Updated a minute ago

Related To	Type	Most Recent Approver
1 Oliver semester 5	Quote	Hector Rafael Alvarez Aceves

×

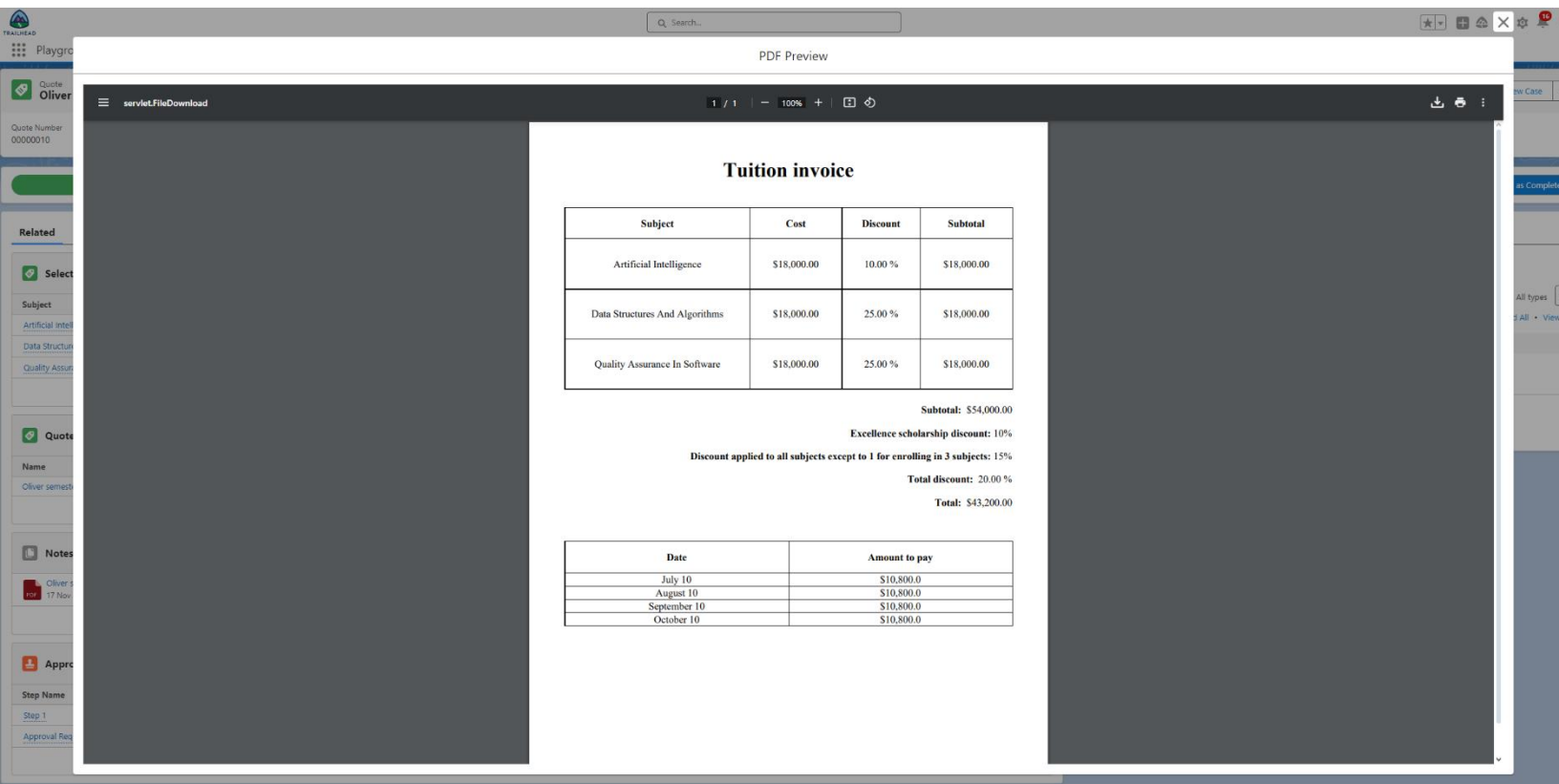
Approve Quote

Comments

Everything seems to be in order


CancelApprove


Quote PDF in the Quote PDFs section





Quote in the student's email

## School invoice pdf






 Invoice.pdf




Hector Rafael Alvarez Aceves via lkvfoocqmbbs6tdlm.biki6m8lt194mx9f.my

To: You


Sun 2024-11-17 05:42 PM


 Invoice.pdf

3 KB



Greetings Oliver Thorne, here is your tuition invoice of the next school term.

 Reply

 Forward

Invoice.pdfOpenSave AsPrintSave to OneDrive

Tuition invoice

Subject	Cost	Discount	Subtotal
Artificial Intelligence	\$18,000.00	10.00 %	\$18,000.00
Data Structures And Algorithms	\$18,000.00	25.00 %	\$18,000.00
Quality Assurance In Software	\$18,000.00	25.00 %	\$18,000.00

Subtotal: \$54,000.00

Excellence scholarship discount: 10%

Discount applied to all subjects except to 1 for enrolling in 3 subjects: 15%

Total discount: 20.00 %

Total: \$43,200.00

Date	Amount to pay
July 10	\$10,800.0
August 10	\$10,800.0
September 10	\$10,800.0
October 10	\$10,800.0

School invoice pdf

Invoice.pdf

Hector Rafael Alvarez Aceves via lk

To: + ' Sun 2024-11-17 05:42 PM

Invoice.pdf

3 KB

Greetings Oliver Thorne,  
here is your tuition invoice  
of the next school term.

Reply

Forward

In this case, since the student was in quarterly period, there were four partial payments made, but in case that the student enrolled in a semester period, there would be six partial payments.

## Tuition invoice

Subject	Cost	Discount	Subtotal
Artificial Intelligence	\$18,000.00	10.00 %	\$18,000.00
Data Structures And Algorithms	\$18,000.00	25.00 %	\$18,000.00
Quality Assurance In Software	\$18,000.00	25.00 %	\$18,000.00

**Subtotal:** \$54,000.00

**Excellence scholarship discount:** 10%

**Discount applied to all subjects except to 1 for enrolling in 3 subjects:** 15%

**Total discount:** 20.00 %

**Total:** \$43,200.00

Date	Amount to pay
July 10	\$10,800.0
August 10	\$10,800.0
September 10	\$10,800.0
October 10	\$10,800.0