


Appendix

1.Email from Mr Lam:

Tạo phần mềm quản lý tình hình thanh toán hóa đơn Inbox x

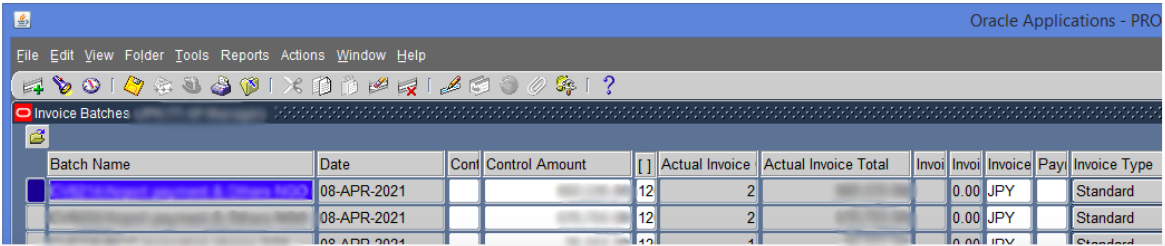
 **lam**
to me ▾

Ba gửi con 2 mẫu báo cáo đề nghị phê duyệt thanh toán tới hạn và báo cáo nợ quá hạn cùng các ô thông tin cần thiết phải cập nhật để chạy báo cáo, cách đặt điều kiện để chạy báo "PDF" hoặc "Excel" hoặc "HTML" để kết xuất dữ liệu cho người sử dụng.

Còn dưới đây là ví dụ của việc tạo FORM để cập nhật thông tin của invoice, payment status để con tham khảo tạo giao diện các cửa sổ cập nhật.

Lưu ý:
Để tạo 1 form update data bất kỳ đều phải có các chức năng tối thiểu và cơ bản sau đây:

- 1 - Update data:
- 2- Find data: (sử dụng query theo phím tắt ví dụ: để nhập thông tin cần tìm ấn F11, Ctrl+F11 để query tìm, có thể tìm theo các tiêu chuẩn quan trọng khác nhau mà người cập n
- 3- Edit, Clear (fields of information), Remove records, Save fields & records



Batch Name	Date	Cont	Control Amount	[]	Actual Invoice	Actual Invoice Total	Invoi	Invoi	Invoice	Pay	Invoice Type
	08-APR-2021			12	2			0.00	JPY		Standard
	08-APR-2021			12	2			0.00	JPY		Standard
	08-APR-2021			12	4			0.00	JPY		Standard

(sensitive data had been blur with the request from Mr Lam)

2.Interview 1 with Mr Lam:

Me: Hi Dad! Thank you for doing this interview with me. Through this interview, I hope to be able to understand more about the program I'm creating for you and do my best.

Mr Lam: Ok.

Me: I had read your email and saw that the Oracle software you have been using still lets you record and search invoices. May I ask what's the problem of using it, or why it takes you time to use it?

Mr Lam: The Oracle software could not export reports that rank invoices based on priority of which should be paid first because it doesn't have inputs that specialized in my company's situation with invoices during Covid, which makes me really need the program you are creating for me. It only could run reports about the money that my company needed to pay for the invoices, the money that my company paid for the invoices, and the money that my company needed to still pay off for the invoices.

Me: After reading your email, I had compiled a list of columns (with specifications for some columns based on your specifications in your email) you will be able to input/update/edit/remove for each row for each invoice:

- Trading Partner Name
- Supplier Name
- Sector (choices: "Service", "Operation", "Commercial", "Others")
- Invoice Date
- Invoice Number
- Invoice currency
- Invoice Amount
- Actual payment time (latest invoice's payable date before overdue)
- Priority rank (1~3 with 3 as highest priority)
- Description
- Remit-To Bank Account Name
- Remit-To Bank Account Number
- Payment date (record the date the user paid the invoice)
- Payment_paid_amount (record the amount paid, if Payment amount = Invoice Amount, Paid = 1, if payment amount > 0 and < Invoice Amount, set data of "Paid" column to 0.5)
- Actual payment date accepted by (Choices as "Partner" if trading partner accept late pay period, "By VNA" if the user's company pays the invoice late based on the contract)
- Notes for penalty for overdue
- Occurrent (choices: "Monthly", "Every 2 months", "Every year")

Do you want to add/remove any column? And do you want to add/remove any specifications for any column? For the payment date, do you want to keep a record of payment date of each time or only payment date when you paid the whole invoice?

Mr Lam: I want a group of data columns to be input only once and become fixed for all the later inputs because that will help save input time for me. Those fixed data columns could be updated but I want it to be pre-stored in the database and doesn't require me to input them all again after the first time. Basically, every data column that involves the partner, I want it to be fixed, and every data column that involves the invoice, I want it to be not fixed.

I want you to change "Actual Payment Time" to "Actual Payment Date". It makes more sense. I want you to add the "Contract Days" and "Expired Contract Date" data columns. Contract Days are usually 30 days in Japan. This means that the last day that my company usually can pay an invoice without getting a penalty is around 30 days after the Invoice date. Actual Payment Date is usually equal to Expired Contract Date, which is equal to Invoice date plus the Contract Days, but sometimes the invoices partner let my company pay later than after the Contract Days, so I want you to leave the Actual Payment Date blank in the beginning when I input the invoice. But yes, please automatically set Actual Payment Date to be equal to Expired Contract Date if I or my workers don't put any thing into Actual Payment Date. Actual Payment Date is more important than Expired Contract Date, so I want your program to sort the invoices based on the

seriousness of expiration dates based on the Actual Payment Date and the report generated date.

About the "Payment Date" column, I want you to expand it to two columns "Payment Date 1" and "Payment Date 2" because my company usually pays the invoice all at once or at max in 2 times. However, you should not that if there is only record in Payment Date 1 and non in Payment Date 2, it is still ok as long as the invoice money is all paid.

I also wants you to add an "Over due period" data column because this helps me to know what is the extended period after the Actual Payment Date that the invoice are able to being overdue (allowed by the partner) or requested to being overdue (by my own company)

Also, about the Priority ranking, I want 1 to be the highest priority and 3 as the lowest priority.

I also want you to add a "Tax %" data column because this helps me when dealing with creating tax reports.

Me: So is the "Over due period" data column different from the "Contract Days"?

Mr Lam: Yes, Contract Days help us determine the Expired Contract Date of the contract date, but the Over due period could help change the Actual Payment Date.

Me: I also coming up with a list of data about each invoice that could be searchable by the program:

- Invoice number
- Trading partner name
- Occurrent item
- Supplier Site,
- Invoice status (paid; not paid; partial paid)

First about the Trading partner name, do you prefer to search with the full name, short name, or both? And, do you want to add/remove any searchable data?

Mr Lam: Instead of Trading partner name, I want to search with Supplier name because it is shorter to type. I don't need the Occurrent item and Supplier Site. Searching with Invoice status is helpful, but could you also add searching with "Invoices added date" data column?

Me: Sure. Then I will have to add that data column to one of the data column inputs as well.

Me: Is it correct that you want to have the ability to view payment information (is it paid, if yes how much, when) about each invoice in the program?

Mr Lam: Yes, correct.

Me: I also read about the “Create report” function that you want in the program. I so far had come up with 4 filtered invoices tables with 4 formulas to create them:

- Display all upcoming invoices: if the Actual Payment time - report generated time = positive number
- Display all overdue invoices: if the Actual Payment time - report generated time = negative number
- Filter based on priority ranking: query the invoices in decreasing order of the priority ranking (1-3) that the user gave for each invoice. (Meaning the more important invoice will be displayed on top of others)
- Filter based on payment information/ if the invoices are paid, not paid, or partially paid: query the invoices based on the data of the “Paid” data column (1 as paid, 0 as not paid, 0.5 as paid partially)

Would you like the Priority ranking and Payment Information feature to also work along with the upcoming invoices and overdue invoices? Do you want to generate more tables with formulas? Are the above formulas and tables correct?

Mr Lam: This is alright, but you could just do it like this: I want two buttons to generate two most important reports: one listing out overdue invoices and one listing out all the invoices my company still needs to pay over a period of time that I set. Other than that, I want to be able to export any data/table I searched/filtered as well. The formulas you are using are correct. However, when you rank the importance of the invoices for the 2 specific reports (Overdue Invoice Report and Invoice Payment Schedule Report) that I want, I want you to prioritize the invoices based on the Actual payment date, then the Priority Ranking column.

Me: For the platforms you want to export the filtered tables to, I see that you want them to be Excel and HTML. I don't really see HTML files being used as storing information, are you sure you want HTML to be one of the platforms?

Mr Lam: HTML could still be useful, but you are right, I don't really need it now. You can focus on exporting reports to Excel.

Me: About the format of the reports of the exported filtered tables on various platforms, is it correct that you want the reports to include the period of time when the invoices are created and a table with data columns that are filtered by you in the program?

I propose that the exported table in the reports include all the data columns below:

- Numerical order (ranking)
- Trading partner name
- Description

- Invoice number
- Invoice currency
- Invoice Amount
- Invoice Date
- Payment information (Paid or not or partially)
- Paid amount
- Actual Payment Date
- Actual Payment Date accepted by (By VNA or Accepted by partner)
- Unpaid amount
- Notes for penalty for overdue

What do you think about this proposal? Do you want to add anything more like headers into the report?

Mr Lam: Yes, this would be very good. But for now, I just need you to export the whole table with every data column of each invoice. Although, for the report listing out all the invoices my company still needs to pay over a period of time that I set, I want all the overdue invoices to be put on top of all other invoices.

Me: Also, Mr Lam, I see that your program will contain a lot of sensitive data related to your company. Do you want me to create a security system to protect them?

Mr Lam: Actually yes, that would be great. Someone might get into the program, make some changes, and mess up the whole database.

Me: Do you have anything you want to add or want me to create in the program?

Mr Lam: Um.. Yes. I might let other employees use the program to help me with the invoices as well, so I would like you to let multiple people create their own account with their own password on the program. The reason is because then the program can save the username who added or edited an invoice, holding them accountable for what they input.

Me: Sure, so this means I will have to add another data column called "User" for each invoice row.

Me: Thank you for doing the interview with me Dad. After today's interview, I will start creating the success criteria. Could I schedule a second interview sometime very soon with you to get your approval over those success criteria?

Mr Lam: Sure.

Me: Ok, thank you!

3. Evaluation interview (after Mr Lam had used my program Financiaz for 2 weeks):

Me: Hi Dad. Thank you for doing this interview with me. So you have used Financiaz for 2 weeks, today I would love to interview you to see if it has fulfilled your requirements/success criterias and if you have feedback for me.

Mr Lam: Yeah sure. So overall, I can say that your program fulfilled my requirements, although I will elaborate on what I think you can improve with the program later on. First, one big thing I would want you to do is to have the button oriented on top horizontally on the screen just like the menu bar on top of an Excel file, and also for the program to have less screen and be more dense in a few screens. The reason is because when I use the program, it takes me quite a time to go between functions. I added an invoice, now if I want to search for an invoice, I need to go to the Home screen and then I need to click the Filter/Search button, and only then I will be able to search for invoices. If you can implement the top horizontal toolbar and condense buttons and elements into only a few pages, you will help me to use the program a lot more efficiently.

Me: I understand. Yes, of course I will.

Mr Lam: I see that your program fulfilled my requirement to be able to search with Invoice Number, Trading Partner Name, Invoices added date, Invoices date, Payment information, but in the future, I would like you to adds a search function to search a trading partner directly as well. Right now, if I want to view information about a trading partner, I need to search up and click on an invoice.

Me: Yes, that is true.

Mr Lam: Another thing is that instead of requiring me to type in the Trading partner name in the adding Trading partner screen, you can make it so the program will drop down multiple existing trading partners for me to choose, this will be a lot quicker and help me avoid mistake in typing in an already existing trading partner. You can implement this function in the current "Select Trading Partner" text field in the adding invoices screen as well.

Me: Yes, I understand. That's great feedback!

Mr Lam: The next feedback I would give you is that I don't need the Occurrence data column for an invoice because I would prefer to manually type occurrences invoice to avoid mistakes (because even for an occurrence invoice, details could change based on the contracts).

Me: Ok.

Mr Lam: I really like that your program allows me to allow my employees to use it and hold them responsible for what they input/edit the invoices by storing the name of the person who added/updated an invoice. However, it would even be better if you can design a further privilege system that categorizes the users into different levels, and depending on these different levels,

the users will be able to have certain different rights to use the program. For example, as the admin, my account could access every function, but for my employees accounts, they can not update invoices.

Me: That's something I didn't think of. Thank you for telling me.

Mr Lam: I also would like your program to allow me to search with more ways. For example, I would like to be able to search with an amount of money because sometimes, I remember the amount of money rather than an invoice number. Another way that I also want is by searching invoices with keywords based on the description of the invoices.

Me: Yes, I understand.

Mr Lam: About the excel reports and export files in general, I would like you to set the cell size to be longer so I will be able to view all data of my exported invoices at once when I open the Excel files. Right now, in the beginning, when I open an Excel file, many data columns are squeezed together, and I have to manually expand them to be able to see the data of the invoices.

Me: That's true. Thank you.

Mr Lam: Another thing that I would like you to fix is to sort the invoices in the Overdue Invoice Report and the Invoice Payment Schedule Report first based on the ranking of the trading partner of the invoice before sorting them based on the Actual payment date of the invoices. Right now, your program is sorting the invoices first based on the Actual payment date before sorting them based on the ranking of the trading partners of them. The reason is that my way will help me to be able to see the invoices in categorized (ranking of the trading partner) and works easily with each category.

Me: Yes.

Mr Lam: I don't have much more recommendations, although I think I have one more. In the Overdue Invoice, Invoice Payment Schedule Report, and more Excel files exported from the searched/filtered screen, there is a column called "Paid" that took me a while to understand what that means. I now know that it is a payment status, with Paid = 0 as not paid, Paid = 1 as paid, Paid = 0.5 as partial paid. I would like to change this column Paid to "Payment status" and keep them as "Paid, Not paid, and Partial paid" instead of "1, 0, and 0.5").

Me: Ok!

Mr Lam: Oh yes, another function I would like you to add is the function to set the range of date based on the Actual payment date for the Invoice Payment Schedule Report. Right now, it can only schedule payment for all unpaid invoices, but sometimes, I would only schedule payment

for unpaid invoices that have an Actual payment date between a range of dates or up until a specific date.

Me: Ok, I will add this function in the future.

Mr Lam: I just thought of this, but another last recommendation was for you to move the "Invoice added date" column to the end right of the invoices table, next to the "Invoice added by user" column because it's not crucial to see on the screen compared to other important data columns like "Invoice date", "Invoice amount" column.

Me: Ok! Thank you for your feedback.

Mr Lam: Also, another recommendation would be for you to format the format of the numbers in the Excel files. I would like you to add a comma for every 3 zeros following international convention because I prefer to see numbers in this way.

Me: I understand.

Mr Lam: Another recommendation I would like to give you is to show a pop up before any important actions are taken (like deleting/update/or adding an invoice) and for any error that an user did (for example, entering an invalid trading partner name into the adding invoice screen).

Me: Ok!

Mr Lam: Something I also noticed is that when I update a trading partner, the program updates all invoices that have that trading partner. I think you think it is good, but it's actually quite problematic. The problem is that when a user updates a trading partner, he might do it because there's a new contract for the trading partner. Not all invoices needed to be renewed/updated based on this new contract, but your program right now is renewing all invoices. I recommend you to be able to create a program that can allow users to store multiple versions of a trading partner for multiple contracts (you can do so by adding in a "Active date" data column for each trading partner. If you can't do that immediately, I recommend you stop this function (to update all invoices with the updated trading partner when updating a trading partner) for now.

Me: Yes. Thank you!

Mr Lam: Lastly, I would love your program to be able to allow users to import Excel files of invoices that follow certain conditions into the program; this will help me and my employee to add invoices to the program a lot quicker.

Me: Ok!

Mr Lam: I think I have finished giving you my feedback. You have fulfilled all my requirements for the program, but I would like you to follow the feedback I gave you today and improve your program. Overall, I think it's a splendid program even for now.

Me: Yes, I understand. I will follow your feedback and improve the program. Thank you so much for your feedback and taking the time to do this interview with me. Please have a great day.