Odoo User Guide

Team Members:

Joann Tan (U1811422G)
Ng Ching Jie (U1910649D)
Phua Sheng Han (U2010538E)
Wong Yong Sheng (U2010110E)
Yong Jia Xun (U2010225K)

Table of Contents

About Us

TEAM MEMBERS	
Joann Tan (U1811422G)	https://drive.google.com/file/d/1HvLmD8qpMm1DX9ZZ21hqMoJLqNo1qz8a/view?usp=sharing
Ng Ching Jie (U1910649D)	https://www.youtube.com/watch?v=kuqgGanuiHo&ab_channel=ChingJieNg
Phua Sheng Han (U2010538E)	https://youtu.be/lTMFhy6iBtQ
Wong Yong Sheng (U2010110E)	https://ntu-sg.zoom.us/rec/share/rXuEcWJEs6EUG8Fc8CqPDar5Bi6Tb5FspCi17MNu-TYtcA9KFWLQIxbFvSkYST57.axbe4Fulpo_Kv0-i Passcode: #h5Xs?u#
Yong Jia Xun (U2010225K)	https://youtu.be/1jH_0TLq4zg

**Project**   **Objective**

The source of inspiration came from our personal work experiences. We found that applying for claims and leaves were inefficient and disorganised. For instance, when employees email their managers to apply for claims, managers have to approve claims and leave individually. Additionally, they may overlook certain emails. Thus, our objective is to create a seamless user experience that oversees all the claims and leave applied for, as well as a Chatbot that attends to employees' enquiries. We aim to create a realistic scenario where managers and employees access separate systems and have access to different information on their accounts. Our project integrated a range of functions (where it is applicable) covered in the course to create the system, Odoo. .

WORK RESPONSIBILITY DISTRIBUTION	
Leave + Claim Management System	Jia Xun, Joann, Ching Jie, Sheng Han, Yong Sheng
HR Chatbot	Joann
Checking for Errors and System Re-prompt	Jia Xun, Ching Jie, Sheng Han, Joann
Programming User Guide (Part 1)	Joann, Ching Jie, Sheng Han, Yong Sheng
Data Cleaning	Jia Xun, Joann, Ching Jie, Sheng Han
Analytics A3 Poster	Jia Xun, Joann, Ching Jie, Sheng Han, Yong Sheng

Predefined Data:
Employees' and Managers' Information

In every company, employees compensation and benefits package differs from one another. Therefore, in our dataset, we have predefined the information for each employee and manager with the use of dictionary. Employees and managers are identified by their ID (E.g emp_1, man_1).

ORGANISATION

MANAGERS

| man_1 (Angel) | man_2 (Boba) |

EMPLOYEES

| emp_1 (Joanne) | emp_2 (Hans) |
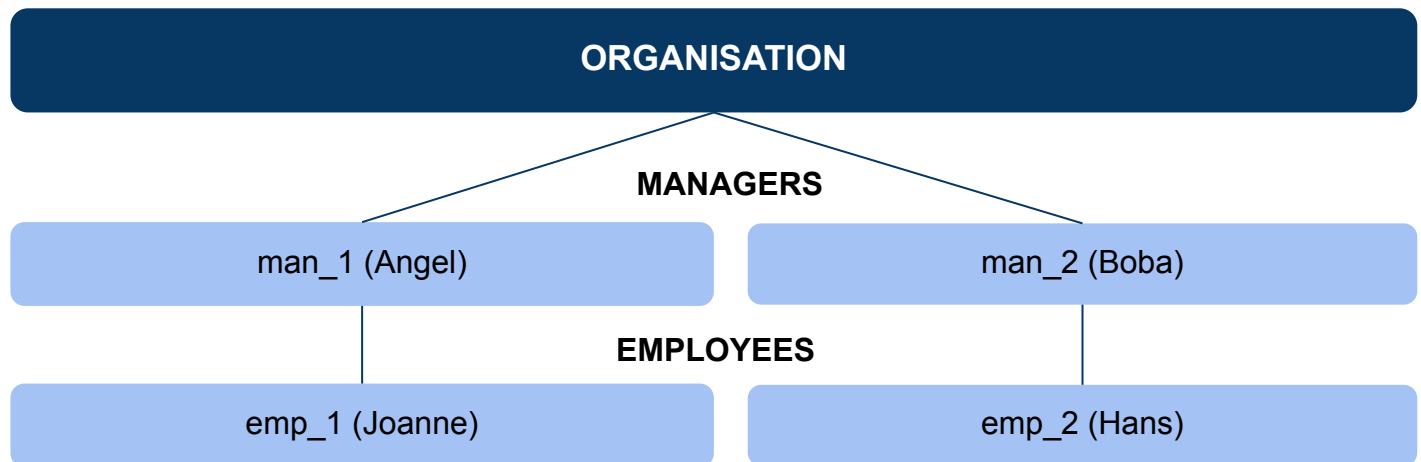
```python
comp_dict = {
  "emp_1" : {"Name" : "Joanne",
             "Role" : "Banker",
             "Salary" : 8000,
             "Manager" : "Angel",
             "Leave Balance" : 12,
             "Claims Made Successfully" : 0},

  "emp_2" : {"Name" : "Han",
             "Role" : "Banker",
             "Salary" : 8000,
             "Manager" : "Boba",
             "Leave Balance" : 3,
             "Claims Made Successfully" : 0},

  "man_1" : {"Name" : "Angel",
             "Role" : "Manager",
             "Salary" : 12000,
             "Employee" : "Joanne",
             "Employee_id" : "emp_1",
             "Leave Balance" : 12,
             "Claims Made Successfully" : 0},

  "man_2": {"Name": "Boba",
            "Role": "Manager",
            "Salary": 12000,
            "Employee": "Han",
            "Employee_id": "emp_2",
            "Leave Balance": 12,
            "Claims Made Sucessfully": 0},
}
```

Leave Dictionary

Each dictionary is categorised using the employee's and manager's ID as the key. Values will be appended into the dictionary when they apply for leave(s). "emp_1" has a leave date pending for confirmation, whereas "emp_2" have leave dates that are approved by the manager.

```
Count_Of_Leaves_Pending = {
 "emp_1" : 0,
 "emp_2" : 0,
 "man_1" : 0,
 "man_2" : 0
}

Days_Applied_Rejected ={
 "emp_1" : [],
 "emp_2" : [],
 "man_1" : [],
 "man_2" : []
}

Days_Applied_Pending = {
 "emp_1" : ["05/12/2021","06/12/2021"],
 "emp_2" : [],
 "man_1" : [],
 "man_2" : []
}

Days_Applied_Confirmed = {
 "emp_1" : [],
 "emp_2" : ["01/01/2021", "02/01/2021", "03/01/2021", "04/01/2021", "05/01/2021","06/01/2021","07/01/2021","08/01/2021","09/01/2021"],
 "man_1" : [],
 "man_2" : []
}
```

Claims Dictionary

Each dictionary is categorised using the employee's and manager's ID as the key. Values will be appended into the dictionary when they apply for leave(s). Both employees (emp_1, emp_2) have taxi fares and medical claims pending for managers' confirmation. Once approved, the amount will be appended into the Claims_Confirmed dictionary while Claims_Pending reverts back to 0.

```
Claims_Pending = {
  "emp_1" : {"taxi fare" : 20,
             "medical claims": 15,
             "misc exp" : 0},

  "emp_2" : {"taxi fare" : 20,
             "medical claims": 15,
             "misc exp" : 0},

  "man_1" : {"taxi fare" : 0,
             "medical claims": 0,
             "misc exp" : 0},

  "man_2" : {"taxi fare" : 0,
             "medical claims": 0,
             "misc exp" : 0},
}
```

```
Claims_Rejected = {
  "emp_1" : {"taxi fare" : 0,
             "medical claims": 0,
             "misc exp" : 0},

  "emp_2" : {"taxi fare" : 0,
             "medical claims": 0,
             "misc exp" : 0},

  "man_1": {"taxi fare": 0,
            "medical claims": 0,
            "misc exp": 0},

  "man_2": {"taxi fare": 0,
            "medical claims": 0,
            "misc exp": 0},
}
```

```
}
Claims_Confirmed = {
  "emp_1" : {"taxi fare" : 0,
             "medical claims": 0,
             "misc exp" : 0},

  "emp_2" : {"taxi fare" : 0,
             "medical claims": 0,
             "misc exp" : 0},

  "man_1": {"taxi fare": 0,
            "medical claims": 0,
            "misc exp": 0},

  "man_2": {"taxi fare": 0,
            "medical claims": 0,
            "misc exp": 0},
}
```
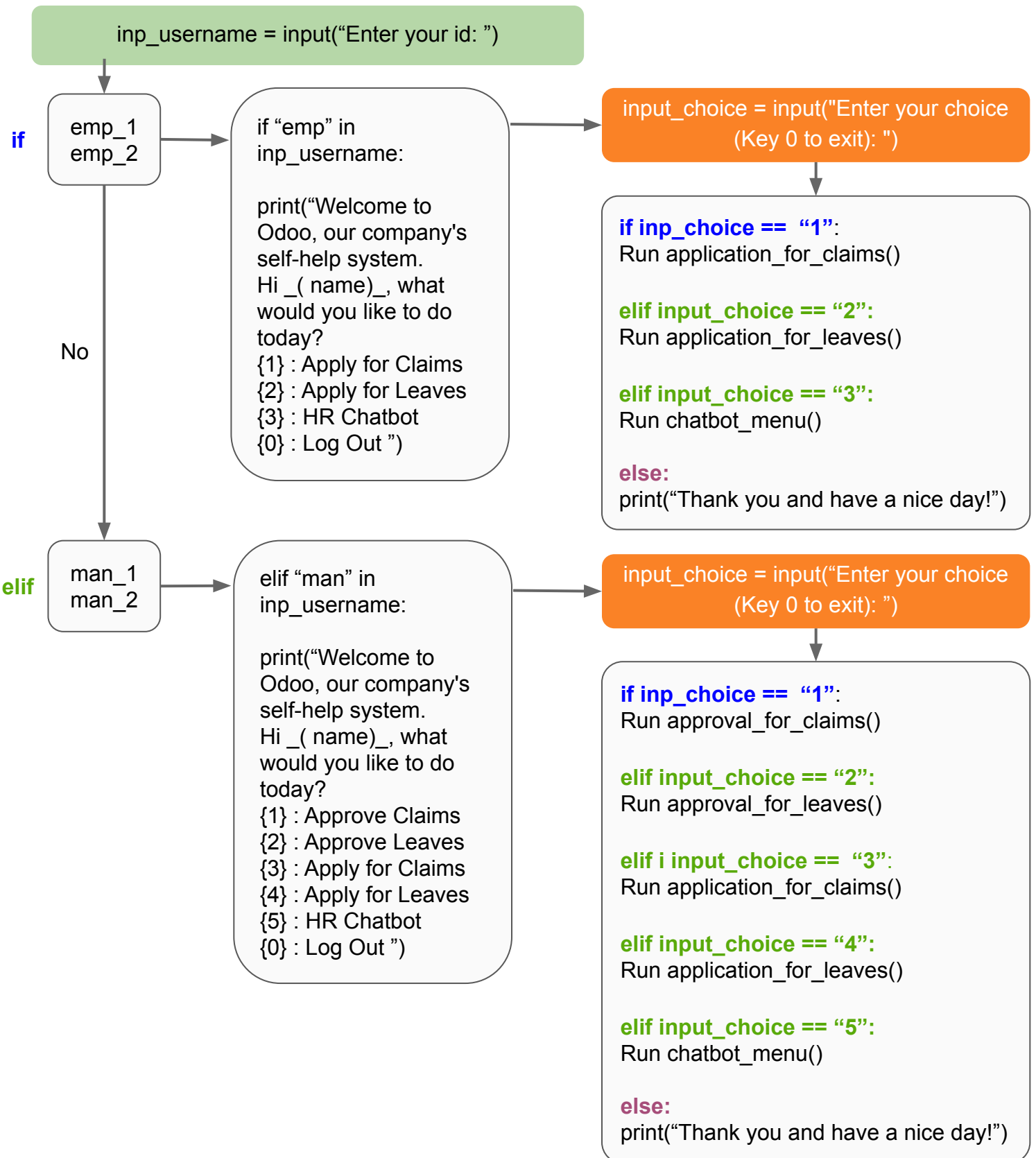
Main Menu
def main_menu()

Employees and managers will see different main menus. Portraying the real reality where employees and managers have access to different system functions. Specially for managers, they have access to the Claims Approval and Leaves Approval portal. Different code functions will run depending on their agenda (input_choice).

inp_username = input("Enter your id: ")

if

emp_1
emp_2

```
if "emp" in
inp_username:

print("Welcome to
Odoo, our company's
self-help system.
Hi _( name)_, what
would you like to do
today?
{1} : Apply for Claims
{2} : Apply for Leaves
{3} : HR Chatbot
{0} : Log Out ")
```

No

input_choice = input("Enter your choice (Key 0 to exit): ")

```
if inp_choice ==  "1":
Run application_for_claims()

elif input_choice == "2":
Run application_for_leaves()

elif input_choice == "3":
Run chatbot_menu()

else:
print("Thank you and have a nice day!")
```

elif

man_1
man_2

```
elif "man" in
inp_username:

print("Welcome to
Odoo, our company's
self-help system.
Hi _( name)_, what
would you like to do
today?
{1} : Approve Claims
{2} : Approve Leaves
{3} : Apply for Claims
{4} : Apply for Leaves
{5} : HR Chatbot
{0} : Log Out ")
```

input_choice = input("Enter your choice (Key 0 to exit): ")

```
if inp_choice ==  "1":
Run approval_for_claims()

elif input_choice == "2":
Run approval_for_leaves()

elif i input_choice ==  "3":
Run application_for_claims()

elif input_choice == "4":
Run application_for_leaves()

elif input_choice == "5":
Run chatbot_menu()

else:
print("Thank you and have a nice day!")
```
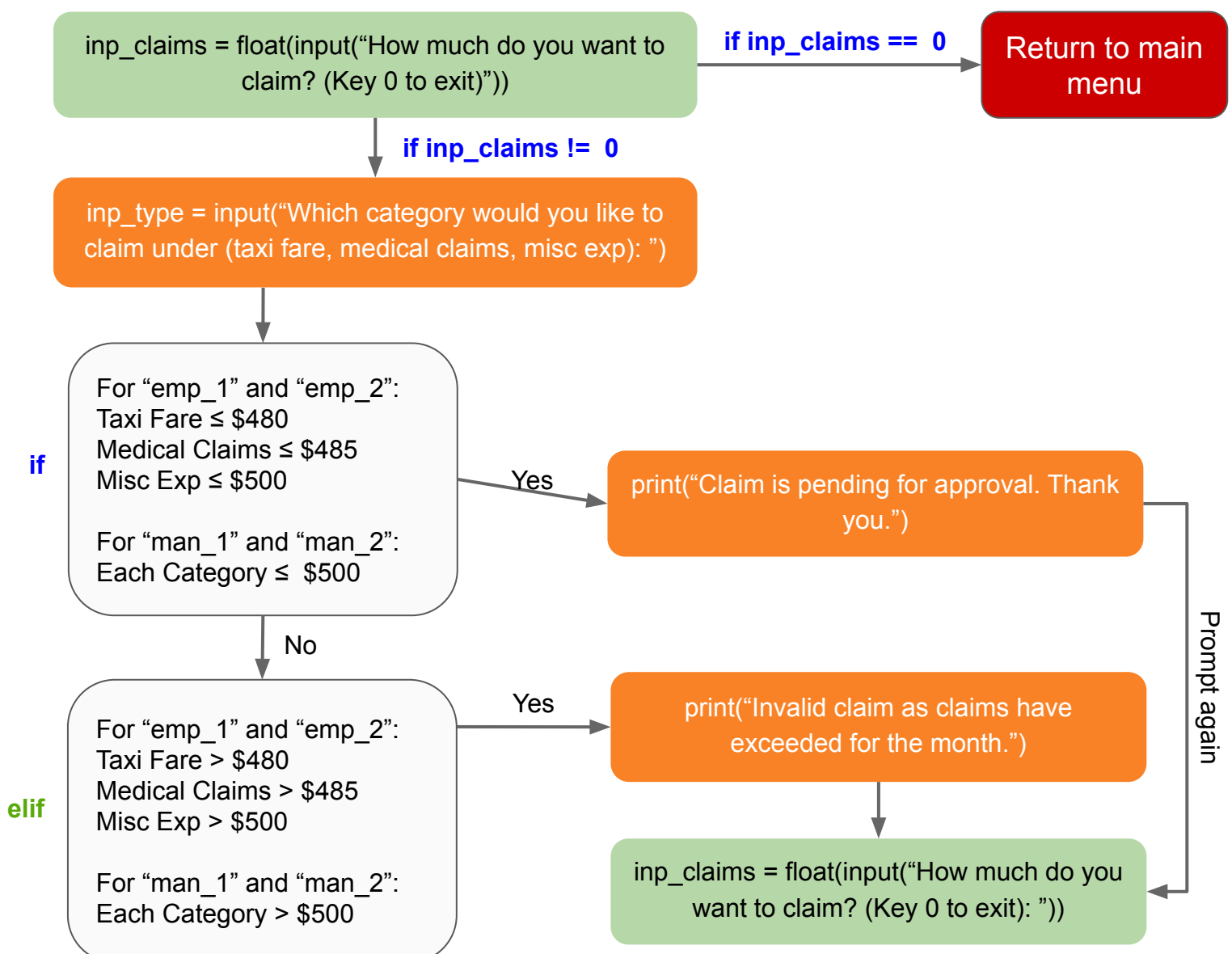
6

Applying for Claims:
def application_for_claims()

All employees and managers are eligible to a total monthly claimable amount for the following categories:

Taxi Fare	$500
Medical Claims	$500
Miscellaneous Expenditures	$500

Depending on the category of claim(s), if the amount that the employee wish to claim have exceeded the monthly limit, Odoo will notify him/her. Otherwise, the claim(s) will be submitted to his/her respective manager for approval.
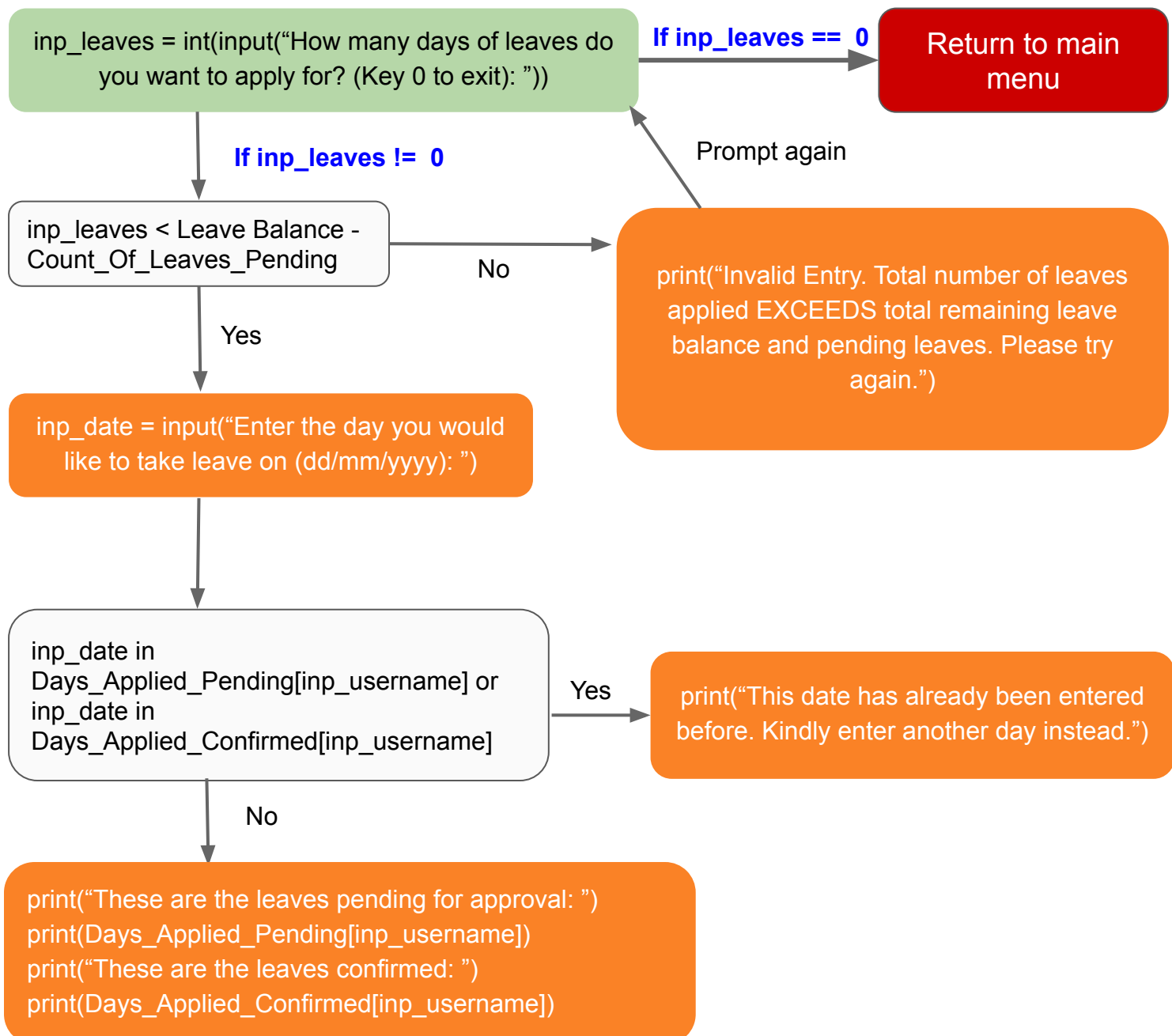
inp_claims = float(input("How much do you want to claim? (Key 0 to exit)"))

if inp_claims == 0 → Return to main menu

if inp_claims != 0

inp_type = input("Which category would you like to claim under (taxi fare, medical claims, misc exp): ")

if
For "emp_1" and "emp_2":
Taxi Fare ≤ $480
Medical Claims ≤ $485
Misc Exp ≤ $500

For "man_1" and "man_2":
Each Category ≤ $500

Yes → print("Claim is pending for approval. Thank you.")

No

elif
For "emp_1" and "emp_2":
Taxi Fare > $480
Medical Claims > $485
Misc Exp > $500

For "man_1" and "man_2":
Each Category > $500

Yes → print("Invalid claim as claims have exceeded for the month.")

inp_claims = float(input("How much do you want to claim? (Key 0 to exit): "))

Prompt again

7

Applying for Leaves:
def application_for_leaves()

Every employee is entitled to 12 days of leaves annually. Simply state the number of leave day(s) and the date(s). Odoo will inform the employee of the dates that are currently pending for manager's approval.

However, if the number of leave day(s) applied have exceeded the leave balance, the employee will be notified by Odoo.

```
inp_leaves = int(input("How many days of leaves do you want to apply for? (Key 0 to exit): "))
```

If inp_leaves == 0 → Return to main menu

If inp_leaves != 0

```
inp_leaves < Leave Balance - Count_Of_Leaves_Pending
```

No → Prompt again

```
print("Invalid Entry. Total number of leaves applied EXCEEDS total remaining leave balance and pending leaves. Please try again.")
```

Yes →

```
inp_date = input("Enter the day you would like to take leave on (dd/mm/yyyy): ")
```

```
inp_date in Days_Applied_Pending[inp_username] or inp_date in Days_Applied_Confirmed[inp_username]
```

Yes →

```
print("This date has already been entered before. Kindly enter another day instead.")
```

No →

```
print("These are the leaves pending for approval: ")
print(Days_Applied_Pending[inp_username])
print("These are the leaves confirmed: ")
print(Days_Applied_Confirmed[inp_username])
```

HR Chatbot
def chatbot_menu()

Hi _(name)_, what would you like to do today?
{1} : Read up on company policies
{2} : Find out about applying for leaves
{3} : Find out about applying for claims
{4} : Return to Main Menu
{0} : Log Out

Odoo handles general staff enquiries. Simply input the menu option number and the Odoo will provide answers and know-how.

input_chatbot = (input("Please input option 1, 2, 3 or 4 (Key 0 to exit): "))

if input_chatbot == "4" → Return to main menu

if input_chatbot == "1"

print ("Alright, please input the policy number that you would like to read about:
{1} : Leave Entitlement
{2} : Workplace Grievances
{3} : Flexible Work Schedule")

if input_chatbot == "2"

print ("Simply head over to the 'Apply Leaves' portal… pending for approval.")

if input_chatbot == "3"

print ("Simply head over to the 'Apply Claims' portal… amount left for the month.")

policychoice = (input("Please input option 1, 2 or 3 (Key 0 to exit): "))

if

policychoice == "1"
print ("Generally, you are entitled to... eligibility-and-entitlement.")

No

elif

policychoice == "2"
print ("Oh dear!...We hope that you are doing fine!")

No

elif

policychoice == "3"
print ("Work-life balance...completed in fewer than five workdays.")

print ("Do you want to continue chatting?")
continue_chat = input("Enter Yes / No: ")

elif continue_chat == "No"
print ("Goodbye! Have a nice day!")

No

if continue_chat == "Yes"
chatbot_menu()

Return to main menu

Approval for Claims (Managers only)
def approval_for_claims()

Managers are able to approve / reject claims made by their respective employees. For instance, Angel (man_1)) is able to approve / reject claims for Joanne (emp_1).

First, the Manager would have to select the category of claims (taxi fare, medical expenses, misc expenses) that they wish to approve / reject. Upon approval, the Claims_Pending amount for that category will be reverted back to 0 and the Claims_Confirmed will be appended. The Claims_Made_Successfully in the dictionary (comp_dict) will also be appended.

When Angel (man_1) logs in and choose option 1 (Approve Claims), Odoo prompts:

> Here are Joanne's pending amount for claims
> Taxi Fares : 20
> Medical Claims : 15
> Misc Expenses : 0

> input_category = input("Select category (taxi fares, medical claims, misc exp)(0 to exit):

if(input_category == "taxi fares"):

> input_choice = input(**"Please key in Y/N: "**)

if (input_category == "medical claims"):

> input_choice = input(**"Please key in Y/N: "**)

if (input_category == "misc exp"):

> input_choice = input(**"Please key in Y/N: "**)

if (input_category == "0"):

> print(**"**PENDING**"**)
> print(comp_dict...[**"taxi fare"**])
> print(comp_dict...[**"medical claims"**])
> print(comp_dict...[**"misc exp"**])
>
> print(**"**CONFIRMED**"**)
> print(comp_dict...[**"taxi fare"**])
> print(comp_dict...[**"medical claims"**])
> print(comp_dict...[**"misc exp"**])
>
> print(**"**REJECTED**"**)
> print(comp_dict...[**"taxi fare"**])
> print(comp_dict...[**"medical claims"**])
> print(comp_dict...[**"misc exp"**])

if (input_choice == "y"):

> Claims_Confirmed[emp_id_value][**"taxi fare"**] += Claims_Pending[emp_id_value][**"taxi fare"**]
>
> comp_dict[emp_id_value][**"Claims Made Successfully"**] += Claims_Pending[emp_id_value][**"taxi fare"**]
>
> Claims_Pending[emp_id_value][**"taxi fare"**] = 0

if (input_choice == "n"):

> Claims_Rejected[emp_id_value][**"taxi fare"**] += Claims_Pending[emp_id_value][**"taxi fare"**]
>
> Claims_Pending[emp_id_value][**"taxi fare"**] = 0
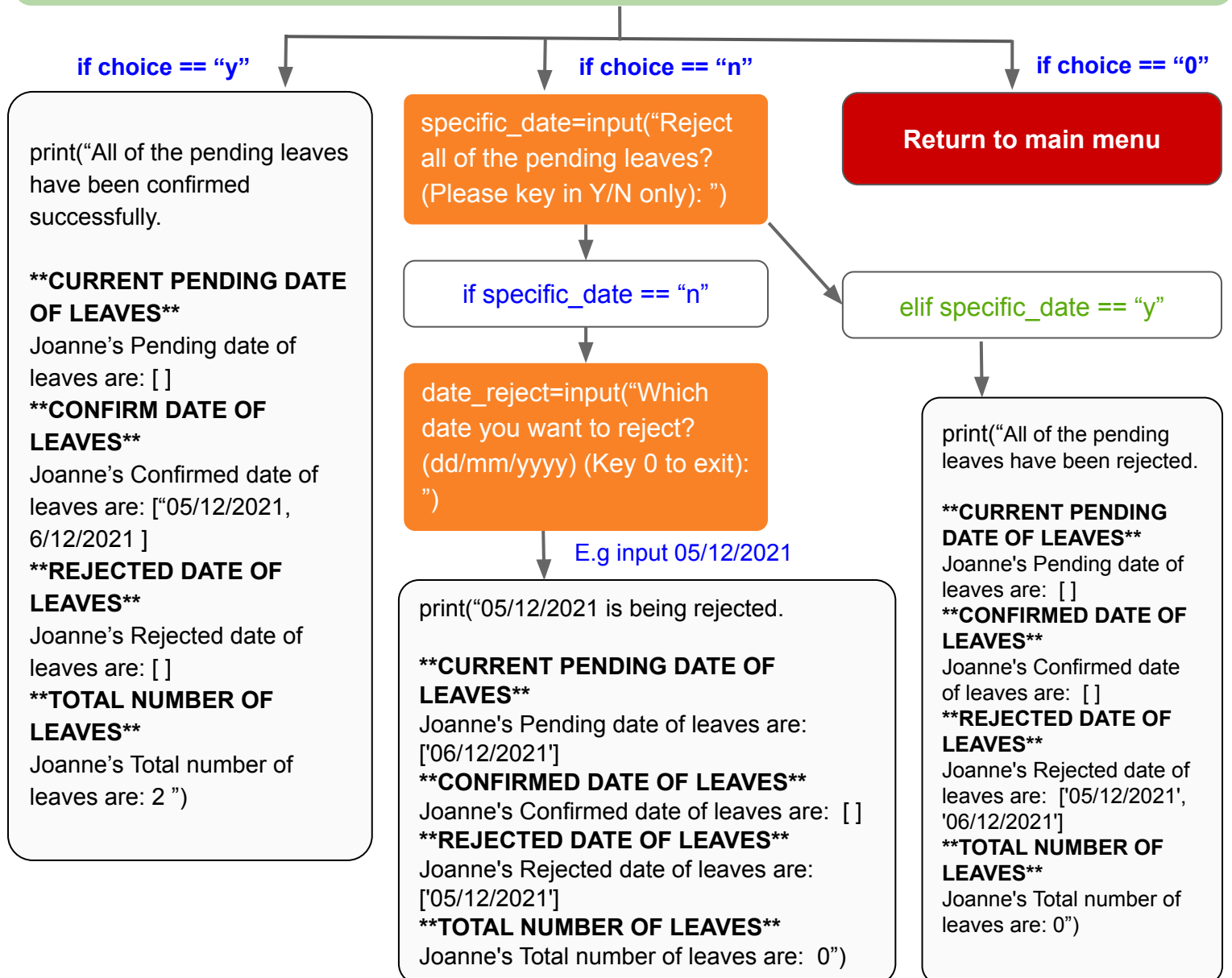
Approval for Leaves (Managers only)
def approval_for_leaves()

Managers are able to decide whether to approve the leaves applied by their respective employees. For instance, Angel (man_1) can choose to only approve or reject Joanne's (emp_1) leave applications but not Han's (emp_2). Firstly, the manager will be able to view their respective employees' leaves that are pending. Thereafter, Odoo will prompt the manager whether to approve all of the pending leaves. The flowchart below is an example of how the system will work:

When Angel (man_1) logs in, Odoo will prompt:

> Here are Joanne's pending leaves:
> Date of pending leaves: ["05/12/2021", "06/12/2021"]

> choice = input("Approve all of the pending leaves? (Please key in Y/N only) (Key 0 to exit): ").lower()

if choice == "y"

print("All of the pending leaves have been confirmed successfully.

CURRENT PENDING DATE OF LEAVES
Joanne's Pending date of leaves are: [ ]
CONFIRM DATE OF LEAVES
Joanne's Confirmed date of leaves are: ["05/12/2021, 6/12/2021]
REJECTED DATE OF LEAVES
Joanne's Rejected date of leaves are: [ ]
TOTAL NUMBER OF LEAVES
Joanne's Total number of leaves are: 2 ")

if choice == "n"

specific_date=input("Reject all of the pending leaves? (Please key in Y/N only): ")

if specific_date == "n"

date_reject=input("Which date you want to reject? (dd/mm/yyyy) (Key 0 to exit): ")

E.g input 05/12/2021

print("05/12/2021 is being rejected.

CURRENT PENDING DATE OF LEAVES
Joanne's Pending date of leaves are: ['06/12/2021']
CONFIRMED DATE OF LEAVES
Joanne's Confirmed date of leaves are: [ ]
REJECTED DATE OF LEAVES
Joanne's Rejected date of leaves are: ['05/12/2021']
TOTAL NUMBER OF LEAVES
Joanne's Total number of leaves are: 0")

if choice == "0"

Return to main menu

elif specific_date == "y"

print("All of the pending leaves have been rejected.

CURRENT PENDING DATE OF LEAVES
Joanne's Pending date of leaves are: [ ]
CONFIRMED DATE OF LEAVES
Joanne's Confirmed date of leaves are: [ ]
REJECTED DATE OF LEAVES
Joanne's Rejected date of leaves are: ['05/12/2021', '06/12/2021']
TOTAL NUMBER OF LEAVES
Joanne's Total number of leaves are: 0")

1. To begin, login as an employee using your employee id. Input "emp_1".

2. From the main menu, we start with **Applying for Claims**. Input "1". Odoo will show the amount of claims that you can claim for each category.

3. Key the following:

SYSTEM PROMPT:	INPUT THE FOLLOWING:
How much do you want to claim?	480
Which category would you like to claim under (taxi fare, medical claims, misc exp):	taxi fare
How much do you want to claim?	55
Which category would you like to claim under (taxi fare, medical claims, misc exp):	medical claims

```
Enter your id to begin: emp_1

=======Welcome to Odoo, our company's self-help system.=======

Hi Joanne,what would you like to do today?
{1} : Apply for Claims
{2} : Apply for Leaves
{3} : HR Chatbot
{0} : Log Out
Enter your choice (Key 0 to exit): 1

Here is how much you can claim for each category.
Taxi Fare      : 480
Medical Claims : 485
Misc Exp       : 500

How much do you want to claim? (Key 0 to exit): 480

Which category would you like to claim under (taxi fare, medical claims, misc exp): taxi fare

Claim is pending for approval. Thank you.

Here is how much you can claim for each category.
Taxi Fare      : 0.0
Medical Claims : 485
Misc Exp       : 500

How much do you want to claim? (Key 0 to exit): 55

Which category would you like to claim under (taxi fare, medical claims, misc exp): medical claims

Claim is pending for approval. Thank you.

Here is how much you can claim for each category.
Taxi Fare      : 0.0
Medical Claims : 430.0
Misc Exp       : 500
```

Your claims will be rejected if you have exceeded the monthly limit of $500 for each category.

Otherwise, your claim application will be sent forward to your manager for approval.

4. Odoo will continue prompting "How much do you want to claim? (Key 0 to exit)". Input "0" once you have completed applying for claim(s) and you will be returned to the main menu.

5. At main menu, proceed to **Apply for Leaves.** Input "2". Odoo will display the number of leaves that you can apply for.

```
How much do you want to claim? (Key 0 to exit): 0

Hi Joanne,what would you like to do today?
{1} : Apply for Claims
{2} : Apply for Leaves
{3} : HR Chatbot
{0} : Log Out

Enter your choice (Key 0 to exit): 2
Currently, you can claim up to 10 days of leave.

How many days of leaves do you want to apply for? (Key 0 to exit):
```

6. Input the number of leaves you wish to apply for. Input "2".

7. Input the dates that you wish to apply. Since you have requested to apply for 2 days of leaves, the input will prompt you twice. Input "10/11/2021" and "11/11/2021" respectively.

```
How many days of leaves do you want to apply for? (Key 0 to exit): 2

Enter the date you would like to take leave on (DD/MM/YYYY): 10/11/2021

Enter the date you would like to take leave on (DD/MM/YYYY): 11/11/2021

These are the leaves pending for approval:
['05/12/2021', '06/12/2021', '10/11/2021', '11/11/2021']

These are the leaves confirmed:
[]
```

8. Would you like to return back to the Main Menu? Input "Y".

```
These are the leaves confirmed:
[]

Would you like to return back to the Main Menu? (Enter Y/N only): Y

Hi Joanne,what would you like to do today?
{1} : Apply for Claims
{2} : Apply for Leaves
{3} : HR Chatbot
{0} : Log Off
```

9. At main menu, proceed to use the **HR Chatbot.** Input "3".

```
Hi Joanne,what would you like to do today?
{1} : Apply for Claims
{2} : Apply for Leaves
{3} : HR Chatbot
{0} : Log Out

Enter your choice (Key 0 to exit): 3
```

10. Depending on your agenda, simply follow through and input the chatbot menu numbers accordingly. Here's an example:

```
Hi Joanne,what would you like to find out today?
{1} : Read up on company policies
{2} : Find out about applying for leaves
{3} : Find out about applying for claims
{4} : Return to Main Menu
{0} : Log Out

Please input option 1, 2, 3 or 4 (Key 0 to exit): 1

Alright, please input the policy number that you would like to read about:
{1} : Leave Entitlement
{2} : Workplace Grievances
{3} : Flexible Work Schedule

Please input option 1, 2 or 3 (Key 0 to exit):1

Generally, you are entitled to paid annual leave if you have worked with the company
for at least 3 months. You may wish to check your leave balance through our company
portal or kindly approach your supervisor to find out more.

To read up more about leave eligibility and entitlement, please visit https://
www.mom.gov.sg/employment-practices/leave/annual-leave/eligibility-and-entitlement.
```

11. Exit from the chatbot. Input "N".

12. Log off from Odoo. Input "0".

```
Do you want to continue chatting?

Enter Y/N :n

Hi Joanne,what would you like to do today?
{1} : Apply for Claims
{2} : Apply for Leaves
{3} : HR Chatbot
{0} : Log Off

Enter your choice (Key 0 to exit): 0
Thank you and have a nice day!
```

Note: Do not stop running the code.
Continue with step 13.

13. Now, begin to login as manager. Input "man_1".

14. From the main menu, proceed to **Approve for Claims**. Input "1".

```
Hi Angel,what would you like to do today?
{1} : Approve Claims
{2} : Approve Leaves
{3} : Apply for Claims
{4} : Apply for Leaves
{5} : HR Chatbot
{0} : Log Out

Enter your choice (Key 0 to exit): 1
```

15. Joanne's claims ($400 taxi fare, $55 medical claims) which were applied for earlier on have been appended into the dictionary. Odoo will prompt the total amount of claims that has been applied and pending for Angel's approval.

```
Here are Joanne's pending amount for claims
Taxi Fare       : 500.0
Medical Claims : 70.0
Misc Expenses  : 0
```

16. Select the category for approval. Input "taxi fare", then input "Y".

17. Next, input "medical claims" and input "Y".

```
Select category for approval (taxi fare, medical claims, misc exp)(Key 0 to exit):taxi fare

Please key in Y/N: y

Select category for approval (taxi fare, medical claims, misc exp)(Key 0 to exit):medical claims

Please key in Y/N: y
```

18. Once there is no other claims to approve, input "0" to exit. Joanne's claims breakdown will be displayed.

```
Select category for approval (taxi fare, medical claims, misc exp)(Key 0 to exit):0

**PENDING**
Joanne's Taxi Fare        : 0
Joanne's Medical Expenses : 0
Joanne's Misc Expenses    : 0

**CONFIRMED**
Joanne's Taxi Fare        : 500.0
Joanne's Medical Expenses : 70.0
Joanne's Misc Expenses    : 0

**REJECTED**
Joanne's Taxi Fare        : 0
Joanne's Medical Expenses : 0
Joanne's Misc Expenses    : 0
```

19. Continue to **Approve** **for** **Leaves**. Input "2". Joanne's leave dates (10/11/2021, 11/11/2021) which were applied for earlier on have been appended into the dictionary. Odoo will prompt the list of leave date(s) that Joanne had applied and awaiting Angel's approval.

```
Hi Angel,what would you like to do today?
{1} : Approve Claims
{2} : Approve Leaves
{3} : Apply for Claims
{4} : Apply for Leaves
{5} : HR Chatbot
{0} : Log Off

Enter your choice (press 0 to exit): 2
Here are Joanne's pending leaves:
Date of pending leaves: ['05/12/2021', '06/12/2021', '10/11/2021', '11/11/2021'
```

20. To approve all leave dates, input "Y".

21. Once approved, Joanne's leaves breakdown will be displayed.

```
Approve all of the pending leaves? (Please key in Y/N only)(Key 0 to exit): y
All of the pending leaves have been confirmed successfully.

CURRENT PENDING DATE OF LEAVES
Joanne's Pending date of leaves are:  []

CONFIRMED DATE OF LEAVES
Joanne's Confirmed date of leaves are:  ['05/12/2021', '06/12/2021', '10/11/2021',
'11/11/2021']

REJECTED DATE OF LEAVES
Joanne's Rejected date of leaves are:  []

TOTAL NUMBER OF LEAVES
Joanne's Total number of leaves are:  4
```

22. Once completed, you will return to main menu. To log off, input "0".

23. You have reached the end of the Odoo. Thank you.

```
Hi Angel,what would you like to do today?
{1} : Approve Claims
{2} : Approve Leaves
{3} : Apply for Claims
{4} : Apply for Leaves
{5} : HR Chatbot
{0} : Log Out

Enter your choice (Key 0 to exit): 0
Thank you and have a nice day!

Enter your id to begin: |
```