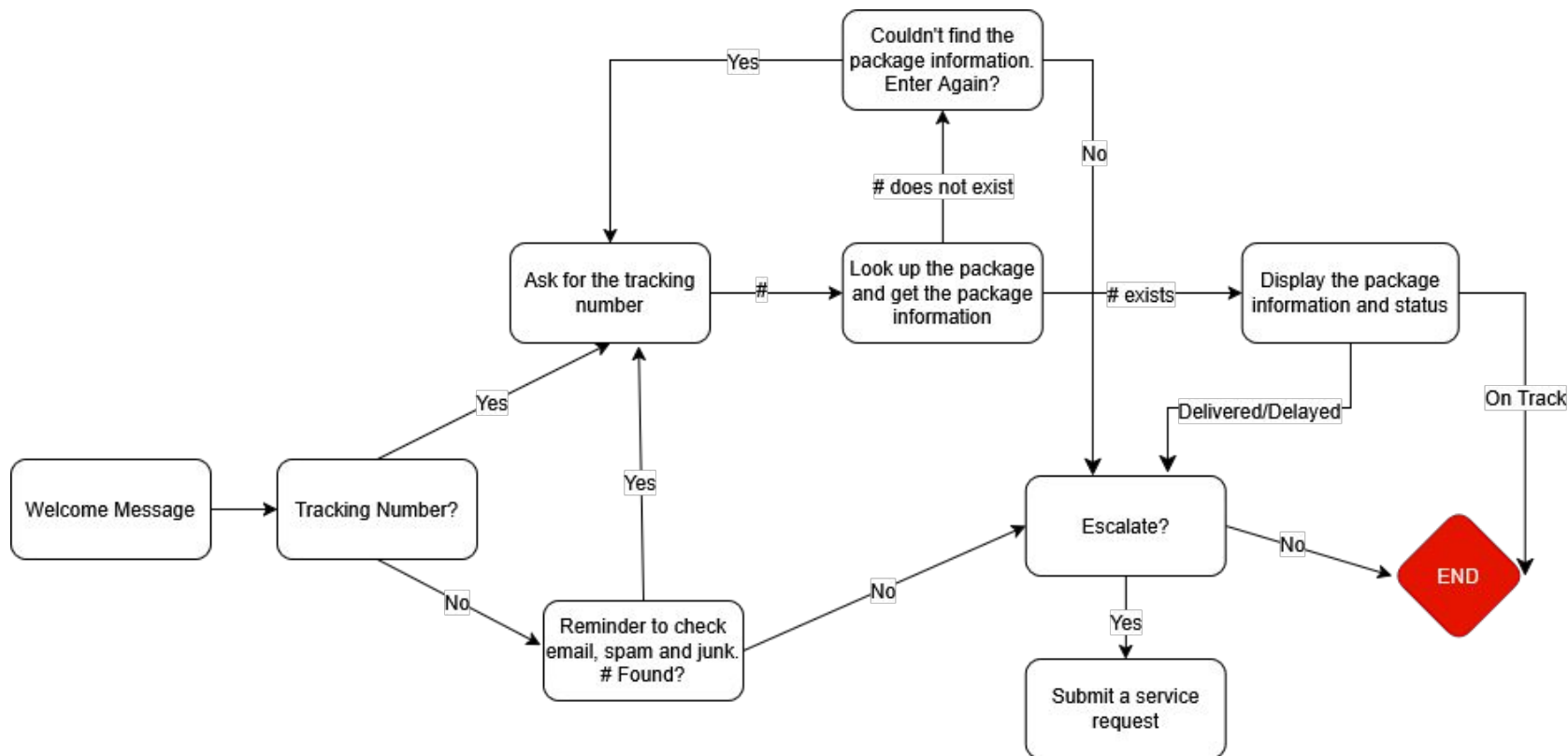# Package Help Bot

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Archini Nayak eGain Take-Home Assignment

Chatbot Flow

Design Choices

Security: The chatbot only reveals package information upon receiving a valid tracking number.

Helpfulness: Bot gives helpful reminders, and collects information to make service requests on the customer's behalf.

Exception-safety: A smooth and error-free user experience reflects well on the company – the customer should never have a broken or buggy interface.

Technical Implementation

Modular functions: Each scenario has a different function. Mix-and-match scenarios and conversation flow. Super clean for future expansion.

Human-readable: Variables and functions are well-named. The central chat flow contains *only* scenario functions.

```python
# asks the customer whether they would like to escalate their specific problem to the
# service department. returns True (yes) or False (no)
def confirm_escalation():
    result = input("Would you like to submit a service request? Please type 'yes' or 'no'. \n").lower().strip()

    while result != 'yes' and result != 'no':
        result = input("Invalid value. Please type 'yes' or 'no'. \n").lower().strip()

    if result == 'yes':
        return True
    else:
        return False
```

```python
def chatbot_flow():
    print("Hi! My name is TrackBot.
```

```python
def confirm_escalation():
    result = input("Would you like to submit
```

```python
def display_package_info(package):
    print(f"Your package is currently at:
```

```python
def remind_and_confirm_tracking_number():
    print("When you ordered your package, you
    print("Please check your inbox, as well as
```

Challenges

Natural Conversation: Creating a natural conversation without bloating the chart with edge cases. Very nicely solved by the technical choice of modular functions.

Input Validation: Always a challenge.

- Ask primarily yes/no questions
- Find outside libraries (regex) that already validate common information types (name, email).

```
Enter your tracking number below. It should be a numbe
r that's ten digits long.
1234567890
Your package is currently at: 190 N South Street, Myto
wn, CA 12345.
We're sorry, but your package has been delayed.
You have the option of submitting a service request, s
o that a member of our team can follow up with more in
formation.
Would you like to submit a service request? Please typ
e 'yes' or 'no'.
yes
Good news! I can help you submit your service request
right here in the chat window. But first, I'll need to
 collect some more information.
Please enter your first and last name.
My Name
Thanks! Now, please enter the email address you used w
hen you ordered the package.
myname@email.com
Thanks! Now, please enter a brief description of your
issue, so our team can get started on fixing it right
away.
My package has been delayed for more than 2 weeks.
Thank you so much! I was able to generate a service re
quest for you. A member of our service team should be
in touch with you shortly.
Thank you for using TrackBot! Have a lovely day :)
```

Ways to Improve

Additional lookup functionality: Implement one-time-password or two-factor auth, so customers can look up packages with email or phone number

Common issue descriptions: Analyze customer data to determine the top N most common problems ("delivered" but not received, delayed for more than 2 weeks, etc). Add the problems as options to be included with the service request, and sort the requests by urgency based on the issue.

Tracking Number?

Yes

No

Reminder to check email, spam and junk. # Found?
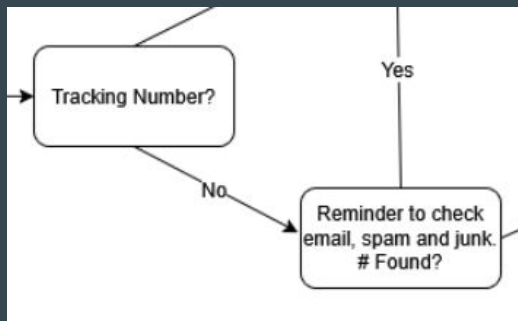
More options at this part of the tree