Example :

Airline Seats Reservation System

Step 1 : what are the internal variables?

① First Name
② Last Name
③ Amount Paid

Step 2 What are the functions of the class?

① Reserve a seat
→ set all of the internal variables to provided values.

② "Un" Resere a seat
→ reset the interval variables to the default values (empty)

③ Check to see if seat is reserved

→ Return T/F

④ Print Method

→ print a report of the instance variables.

Step 3: Write the class

(see airline.py)

Main Program

Suppose we have an airplane with 5 seats. Let's create a list of 5 Seat objects.

num_seats = 5

available_seats = [ ]

```
for i in range(num_seats):
    available_seats.append(Seat())
```

→ This is pretty cool, right?!?!

We now have a list of Seat objects.

Seat 3 object

```
[ Seat(), Seat(), Seat(), Seat(),
  Seat() ]
```

Seat 0 object — Seat 1 object — Seat 2 object — Seat 4 object

→ all of the seats are empty.

Let's write a function (that is part of the main program), to print the current seat status.

this will be the list of Seat objects!

```
def print_seats(seats):
    global num_seats
```

```
seat_status_is_[illegible]
for ii in range(num_seats):
    sect_status_is_empty.append(
        sects[ii].is_empty())
print("Current Sect Status")
print(seat_status_is_empty)
```

call the member function for this object!!

[T, T, T, T, T] (initially)

Let's write a function to print the passenger list.

list of seat objects

```
def print_passenger_list(seats):
    global num_seats
    for ii in range(num_seats):
        if not seats[ii].is_empty():
            print(f"{ii}:", end
                  =" ")
```

seats[ii]. print_seat( )

call member function!!

Finally, let's write a "menu driver". The idea is that we ask the user to first choose a task, and then based on that choice, we do the appropriate task.

(i) print the seat status "p"

(ii) print the passenger list "l"

(iii) reserve a new seat "r"

(iv) quit "q"

input('Enter Command: ')

```
Command = ...

while command != "q":
    if command == "p":
        print_seats(available_seats)
    elif command == "l":
        print_passenger_list(
            available_seats)
    elif command == "r":
        reserve_seat(available_seats)
    else:
        print("Invalid command")
    command = input('Enter Command')
```

we still need to write this !!

```
def reserve_seat(seats):
    Sect_num = int(input('Enter Sect num'))
    if not seats[sect_num].is_empty():
        print("Sect not empty")
    else:
        ...
```

```
firstname = input()
lastname = input()
paid = float(input())
seats[seat_num].reserve(firstname,
                        lastname, paid)
```