

```

# I am creating a class to handle key information
class Key:
    """This is the class I am using to store key and room details."""

    # In this constructor, I define the attributes for key information
    def __init__(self, keynumber="", roomnumber="", checkindate="",
guestname="", reservationstatus="", keystatus=""):
        # These are my private attributes for storing key details
        self.__keynumber = keynumber
        self.__roomnumber = roomnumber
        self.__checkindate = checkindate
        self.__guestname = guestname
        self.__reservationstatus = reservationstatus
        self.__keystatus = keystatus

    # I use this method to get the key number
    def get_keynumber(self):
        return self.__keynumber

    # I use this method to get the room number
    def get_roomnumber(self):
        return self.__roomnumber

    # I use this method to get the check-in date
    def get_checkindate(self):
        return self.__checkindate

    # This method helps me get the guest name
    def get_guestname(self):
        return self.__guestname

    # I use this method to get the reservation status
    def get_reservationstatus(self):
        return self.__reservationstatus

    # This method allows me to get the key status
    def get_keystatus(self):
        return self.__keystatus

    # I use this method to set or update the key number
    def set_keynumber(self, keynumber):
        self.__keynumber = keynumber

    # I use this method to set or update the room number
    def set_roomnumber(self, roomnumber):
        self.__roomnumber = roomnumber

    # This method allows me to set the check-in date
    def set_checkindate(self, checkindate):
        self.__checkindate = checkindate

    # I use this method to update the guest name
    def set_guestname(self, guestname):

```

```

        self.__guestname = guestname

# I use this method to update the reservation status
def set_reservationstatus(self, reservationstatus):
    self.__reservationstatus = reservationstatus

# This method allows me to set or update the key status
def set_keystatus(self, keystatus):
    self.__keystatus = keystatus

# I created this method to display the key details neatly
def display_key_details(self):
    # I'm using f-strings here to format and display all the key details
    print(f"Key Number: {self.__keynumber}")
    print(f"Room Number: {self.__roomnumber}")
    print(f"Check-In Date: {self.__checkindate}")
    print(f"Guest Name: {self.__guestname}")
    print(f"Reservation Status: {self.__reservationstatus}")
    print(f"Key Status: {self.__keystatus}")

# Now, I create an object of the Key class with details for a guest
key_info = Key(
    keynumber="K12345",
    roomnumber="101",
    checkindate="2024-09-22",
    guestname="Ahmad Ali",
    reservationstatus="Confirmed",
    keystatus="Active"
)

# I display the key details using the method I defined earlier
key_info.display_key_details()

# I use the setter methods to update the key number and room number if
needed
# For example, I'm changing the key number to "K54321" and the room number
to "102"
key_info.set_keynumber("K54321")
key_info.set_roomnumber("102")

# I'm displaying the updated key details to confirm the changes worked
print("\nUpdated Key Details:")
key_info.display_key_details()

```