Reservations and Ticketing with Apollo

This specimen contains the Table of Contents and three chapters.

Table of Contents

Introduction

Objectives

After completing this unit, you will be able to:
1. Sign on and sign off.
2. Encode or decode airlines, cities, airports, hotel chains, and car companies.

The computer is one of the most influential inventions of the century-indeed, of all time. Almost every human endeavor has benefited in one way or another from the rapid spread of computers. Yet it was not long ago that computers were rare and their role in the affairs of humanity was minor. Sixty years ago, there were virtually no computers anywhere in the world. In 1950, there were about 250 computers. Today, more than 300 million computers are in use throughout the world.

Until the late 1960s, only the largest companies and government agencies could afford computers. The development of Large Scale Integration (LSI) allowed thousands of electrical circuits to be placed on a small slice of silicon, called a microprocessor. In 1982, IBM Corporation introduced the personal computer, or "PC." Today, the term PC is commonly used in a general sense to refer to any computer which uses a microprocessor.

Global Distribution Systems

A computer reservation system (CRS) is based on a large central computer, or mainframe, serving many sites, such as travel agencies and airport offices. A small travel office may have as few as two terminals, whereas a busy airline reservation center may have more than 100 terminals. A reservation system that serves users in both hemispheres may also be referred to as a global distribution system (GDS).

The Apollo central computer is located in Denver. The part of the mainframe that processes data is called the central processing unit, or CPU. Flight information, airfares, and reservation data are stored in the mainframe's storage unit.

A terminal is often referred to as a CRT (cathode ray tube), the type of television tube that is used for the display of information. Another abbreviation for a computer terminal is VDT (video display terminal). PCs are commonly used in travel agencies to communicate with computer reservation systems.

Apollo provides users with access to airline flight schedules, fare information, hotel rates, car rentals, and other essential travel data. When a reservation is booked by a travel agency, the information is stored by the system and transmitted to the vendor. In many cases, Apollo can provide direct access to the airline's reservation system. Apollo provides availability and fare displays for more than 300 participating passenger carriers.

Sign on/Sign off

Each agent must sign on to Apollo using a predefined code called a sign-on code or agent I.D. The sign-on procedure identifies the agent who will be using the computer and the work area in which he or she will be working.

The work area is an electronic holding area assigned to each terminal. In the work area, the agent assembles information such as the traveler's name, contact telephone number, and ticketing date. Together, this collection of data is referred to as a passenger name record or PNR. When all the data has been assembled, the agent inputs the command to end the transaction, thereby sending the record to the central processor. When a transaction is ended, the agent's work area is erased automatically, so that another passenger record can be assembled.

If a terminal will not be used for an extended period, the agent is instructed to sign off.

Sign on

The basic sign-on entry is used to identify the agent and gain access to the system. This entry has the following format:

SON/<Agent ID Code>

Sign off

Before leaving the agent's set for an extended period of time, or at the end of the work day, the agent must sign off, as follows:

SOF

An agent set that has been left on and not used for two hours is automatically signed out.

After signing on, the agent can switch work areas by means of the following entry:

SB

This entry would be used to switch to work area B. A typical agency has five work areas, identified by the letters A through E. The following entry is to determine the current work area:

OP/W*

Scrolling the Display

The data in an Apollo display may be too large to display at one time. When this situation occurs, it is necessary to scroll the display. Scrolling forward displays additional data, whereas scrolling back redisplays the previous information.

The following commands are used to scroll the display:

MD	Move down (scrolls forward)
MU	Move up (scrolls backward)
MT	Move to the top of the display
MB	Move to the bottom of the display

The top of the display is the first character of the first line of text. The bottom of the display is the last character of the last line.

Encoding and Decoding

In flight availability and tariff displays, codes are used to indicate airlines, cities, and airports. An agent can encode or decode this type of information. The encode function is used to convert a name into a code, whereas the decode function is used to convert a code into a name.

Carrier Codes

Passenger carriers are referred to by two-letter carrier codes. For example, the code for United Airlines is UA, and the carrier code for Delta is DL. The International Air Transport Association (IATA), which represents more than 200 of the world's principal airlines, assigns carrier codes. IATA has also assigned a three-digit airline code to each carrier. For example, the airline code for American Airlines is 001, and the airline code for United Airlines is 016. Eventually, three-letter IATA codes will replace the two-letter carrier codes presently used. For example, the three-letter code AAL will replace the two-letter carrier code AA, now used for American Airlines.

Examples of Carrier Codes for Major North American Airlines

AA	American Airlines	001	AAL
AC	Air Canada	014	ACA
AS	Alaska Airlines	027	ASA
CO	Continental Airlines	005	COA
CP	Canadian Airlines	018	CDN
DL	Delta Air Lines	006	DAL
HP	America West Airlines	401	AWE
NW	Northwest Airlines	012	NWA
UA	United Airlines	016	UAL
US	U.S. Airways	037	USA

Encoding and Decoding Airlines

The following format is used to encode an airline:

Format
S*AIR/<Airline>

Example
S*AIR/AER LINGUS

This example would be used to determine the carrier code for Aer Lingus. A carrier code may be decoded as follows:

S*AIR/AS

This example would be used to determine the name of the airline that has the carrier code AS.

City and Airport Codes

In Apollo displays, cities and airports are indicated by three-letter codes. For example, the code for San Francisco is SFO, whereas the code for the Chicago-O'Hare airport is ORD.
If a city is served by multiple airports, each airport has a different code. For example, New York City is served by three major airports. The code for the New York city area is NYC, whereas the code for the LaGuardia Airport is LGA and the code for Kennedy Airport is JFK. The New York area is also served by the airport in Newark, New Jersey, which has the code EWR.

City and airport codes are designated by the International Standards Organization (ISO) based in Geneva, Switzerland. The same codes are used by all computer reservation systems and passenger carriers that participate in the ARINC network.

Encoding and Decoding Cities and Airports

The following format is used to encode a city or airport:

Format
S*CTY/<City or airport>

Example
S*CTY/ALBUQUERQUE

This example would be used to determine the city code for Albuquerque. If there is more than one city with the same name, the code for each such city is displayed. A city or airport code may be decoded as follows:

S*CTY/FCO

This example would be used to determine the name of the city or airport for the code FCO.

Encoding and Decoding Hotel Vendors

Hotel chains and rental car vendors have two-letter codes. For example, HI is the code for Holiday Inn and ZD is the code for Budget Rent A Car.

The following format is used to encode a hotel vendor:

Format
S*HTL/<Hotel vendor>

Example
S*HTL/RADISSON HOTELS

This example would be used to determine the code for Radisson Hotels. A hotel vendor code may be decoded as follows:

S*HTL/UI

This example would be used to determine the hotel chain that has the code UI.

Encoding and Decoding Car Vendors

The following format is used to encode a car rental chain:

Format
S*CAR/<Car vendor>

Example
S*CAR/AVIS

This example would be used to determine the code for Avis. A car vendor code may be decoded as follows:

S*CAR/ZI

This example would be used to determine the car company that has the code ZI.

Review

1. What entry code is used to sign on to Apollo?

2. What entry code is used to sign off?

3. If the information in a display is too long to be displayed at one time, what entry would be used to display more data?

4. What entry would be used to redisplay the previous information?

5. What entry code is used to determine an airline code?

6. When an airline is encoded or decoded, the text portion of the entry must consist of how many characters?

7. Write the entry to determine the carrier code for Southwest.

8. Write the entry to display the name of the airline that has the carrier code CP.

9. What entry code is used to determine a city or airport code?

10. Write the entry to display the name of the city has the code BTR.

11. Write the entry to display the city code for Colorado Springs.

12. Write the entry to decode the hotel chain code HL.

13. Write the entry to decode the carrier code LH.

14. Write the entry to decode the car vendor code ZR.

15. Write the entry to encode Houston.

16. What entry would be used to display the city and airport codes for Paris?

Flight Availability

Objectives

After completing this unit, you will be able to:
1. Display flight availability.
2. Interpret the information in a flight availability display.
2. Display opposite availability.
4. Modify an existing availability display using follow-up entries.

The term *itinerary* refers collectively to the origin, destination, and intermediate points in a trip. Each portion of an itinerary is referred to as a segment. As an example, consider the following trip:

1. BOS - LAX
2. LAX - BOS

This example includes two flight segments. The first segment in the itinerary is called the originating or outbound segment. The first point of the first segment is called the originating point. In this example, Boston (BOS) is the originating point, and Los Angeles (LAX) is the turn-around point or destination. The flight that returns from the destination to the originating point is called the return flight. The passenger will travel from Boston to Los Angeles on the outbound segment, and from Los Angeles to Boston on the return segment.

If a trip involves a connection, a separate segment is included for each connecting flight. A point in a connection where a change of aircraft occurs is called a connecting point. Any point that is not a connecting point in an air itinerary is a stopover point. For example, assume a passenger will travel from Vancouver to Phoenix, connecting in San Francisco. After attending a meeting in Phoenix, he will return on a nonstop flight to Vancouver. This passenger's itinerary will consist of the following air segments:

1. YVR - SFO
2. SFO - PHX
3. PHX - YVR

In this example, San Francisco is a connecting point, and Phoenix is a stopover point.

The first city or airport in a flight segment is referred to as the board point or origin, and the second city or airport is referred to as the off point or destination. Together, the board point and off point make up a city pair. The following are examples of city pairs:

SFOMIA	San Francisco - Miami
BOSFRA	Boston - Frankfurt
YWGYMQ	Winnipeg - Montreal

Displaying Availability

The entry code A is used to display flight availability, as follows:

Format
A<Departure date><City pair>

Example
A12JUNSEAORD

This example requests flights departing on 12 June from Seattle to Chicago-O'Hare (ORD). If a departure date is not specified, Apollo defaults to the current date. Since flight schedules and seat availability frequently change, it is important to specify the departure date.

When a date is input, the day of the month is typed as one or two digits, and the month is abbreviated using the first three letters. For example, 10 March is entered as 10MAR, and 23 July is entered as 23JUL. If the day of the month consists of one digit, a leading zero may be included. For example, 6 September may be entered as 6SEP or 06SEP. If a departure time is not specified, Apollo displays those flights which depart closest to
8 A.M.

Specifying a Departure Time

When the time is input, A is typed for A.M., and P is typed for P.M. For example, 8:30 A.M. is input as 830A, and 11:00 P.M. is input as 1100P or 11P. 12N may be input for 12:00 noon, and 12M for 12:00 midnight. In general, it is preferable to use the shortest possible format and the fewest number of keystrokes.

The departure time is input after the city pair, as follows:

A17APRORDPHL9A

This example would display availability for flights departing closest to 9 A.M. on 17 April from Chicago-O'Hare to Philadelphia.

Response:

```
 MO 3SEP  C E
1‡ UA 456 F9 Y9 B5 M5 Q5 H3 V3 ORDPHL  930A 1153A 757  80
2* AA1790 F7 Y7 B7 G7 H7 Q7 V7 ORDPHL  944A 1203P 72S  90
3* US 270 F7 A7 Y7 B7 M7 H7 K7 ORDPHL 1010A 1257P D9S  70
4‡ UA 288 F9 Y9 B3 M3 Q3 H0 V0 ORDPHL 1100A  157P 72S  80
5* NW 170 F7 Y7 B7 M7 H7 Q7 V7 ORDDTW  900A 1102A 72S  80
6* NW 204 F7 Y7 B7 M7 H7 Q7 V7    PHL 1215P  139P 757  90
7* US 208 F7 A7 Y7 B7 M7 H7 K7 ORDPIT 1200N  215P D9S  80
8* US 276 F7 A7 Y7 B7 M7 H7 K7    PHL  355P  450P D9S  80
 |  |  |           |             |      |    |    |   ||
 1  2  3           4             5      6    7    8   9 10
```

The availability display contains the following information:

1	Line number	2	Carrier
3	Flight number	4	Seat quota
5	Board point and off point	6	Departure time
7	Arrival time	8	Equipment code
9	On-time performance	10	Stops

The header indicates the departure date and day of the week, as well as the time zone of each point Each flight listing has a line number. Apollo displays a maximum of eight flights in each display. Each flight listing contains the following information:

Line number

The line numbers always begin with 1. Later, you will learn how to use the line number to book a reservation.

Carrier

The carrier code is shown for each flight. The link indicator is displayed just to the right of the line number. The link indicator may be one of the following:

‡	Inside availability carrier
*	Inside link carrier
¤	Direct link carrier
:	Positive acknowledgement carrier

If the airline is an **inside availability** carrier, the exact number of available seat is displayed in each class, up to 9 seats per class If a segment is booked, the seats are immediately deducted from the airline's seat inventory for that flight. A reservation code, called a record locator, is sent back to Apollo by the airline and stored in the passenger's computer record.

If the airline is an **inside link** carrier, the exact number of seats are not displayed, but if a segment is booked, the seats are immediately deducted from the airline's seat inventory. A record locator is sent back to Apollo by the airline.

If the airline is a **direct link** carrier, direct access to the carrier's reservation system can be obtained through a special entry. A link display must be obtained before a guaranteed booking can be secured.

If the airline is a **positive acknowledgement** carrier, Apollo transmits a message requesting confirmation of each booked segment. If the segment is confirmed or waitlisted, the airline sends back a record locator, which is stored in the passenger's record.

Flight number

The flight number is given to the right of the carrier code. The flight number may consist of 1 to 4 digits.

Seat quota

On the right of the flight number are several columns consisting of a letter and a number. These columns indicate the number of seats that can be sold in each class of service. The letter indicates the class, and the number indicates the number of seats. This information is called the seat quota. The maximum number displayed in each class depends on the airline's agreement with Apollo.

The following are examples of common classes of service:

F	First class
C	Business
J	Business
Y	Coach or economy
B	Discount coach
M	Discount coach
Q	Discount coach
V	Discount coach
H	Discount coach
K	Discount coach
L	Discount coach
W	Discount coach

The classes offered on each flight depend on the carrier, type of aircraft, route, and other factors. The maximum number that will be displayed for each class depends on the carrier's agreement with Apollo. More seats may actually be available than the maximum number displayed. However, if more than the maximum number are sold, the seats will not be confirmed immediately. When zero is displayed, the class is said to be "sold out," and seat requests may be placed on a waiting list, or waitlist.

The primary availability display shows up to 10 booking classes for each flight. If more classes exist, the code . is displayed after the last class. The entry code A*C may be used to display all the booking classes for a specific flight:

A*C3

This example would be used to obtain an expanded classes display for line 3.

Board point and off point

To the right of the seat quota are the board point and off point of each flight. The applicable airport code is used for each point.

Departure time

The local departure time is shown to the right of the city pair.

Arrival time

The local arrival time is shown to the right of the departure time.

Equipment code

The equipment code for each flight is shown to the right of the arrival time.

On-Time Performance

The digit to the right of the equipment code indicates the on-time performance of each flight, as required by the Federal Aviation Administration. A factor of 8 indicates that, from 80 to 90 percent of the time, the flight departs and arrives within 15 minutes of the scheduled flight times.

Stops

The number directly to the right of the on-timer indicator shows the number stops. All the flights in the example display are nonstop flights.

Flight Equipment

The aircraft for each flight is indicated by a three-letter equipment code. For example, 747 is the equipment code for Boeing 747 aircraft and D10 is the code for McDonnell Douglas DC-10 aircraft. Some passenger aircraft, such as the 737, DC-10, or L-1011, have multiple models. For example, three basic models of the 727 are used for passenger transportation, including the 727, 727-100, and 727-200. Equipment codes are used in flight availability displays to indicate the type of aircraft used on each flight.

Examples of Equipment Codes for Common Passenger Aircraft

A3B	Airbus Industrie A-300B
D10	McDonnell-Douglas DC-10
D9S	McDonnell-Douglas DC-9 Super Jet
L10	Lockheed 1011 Tristar
M80	McDonnell-Douglas Super 80
72S	Boeing 727-200
733	Boeing 737-300
737	Boeing 737
73M	Boeing 737-200C
73S	Boeing 737-200
747	Boeing 747
757	Boeing 757
767	Boeing 767

The equipment codes 72S and 73S represent special configurations of the 727 and 737 aircraft. The S indicates that the airplanes have been configured for additional passenger seating. These specially configured aircraft are commonly referred to as "stretch jets." Similarly, the codes 72M and 73M indicate a "multiple" configuration, designed to transport both passengers and cargo.

Meals Plus Display

When flight availability is displayed, the following entry may be used to display meal service codes for each flight:

A*M

The Meals Plus display shows the type of meal service provided in each cabin. Expanded code share data, the journey time, traffic restrictions, and abbreviated in-flight service information are also displayed.

The following are examples of meal codes that may be displayed:

B	Full breakfast
K	Continental breakfast
R	Refreshment
L	Lunch
D	Dinner
S	Snack

Follow-Up Availability Entries

After an availability display has been obtained, various follow-up entries can be used to modify the display.

Opposite Availability

When an availability display has been obtained, the entry code A*O may be used to display flights for the return trip, as follows:

Format
A*O<Return Date><Departure Time>

Example
A*O10MAY2P

This example would be used to display return flights on 10 May, departing at around 2 P.M. This entry can only be made after an availability display has been obtained. If the date is omitted, Apollo will display return flights for the current date. For example, assume an agent desires to display opposite availability on the same date as the outbound segment. The following entry may be used to display return flights departing closest to 8 P.M.:

A*O8P

If no date or time is not specified, Apollo will automatically add eight to ten hours from the departure time specified in the original availability entry. If a date is specified, but not a departure time, Apollo defaults to 8A.

In an opposite availability display, the city pair is reversed. For example, if flights were first displayed from SFO to MIA, the opposite availability display will show flights from MIA to SFO.

Additional Availability

Each availability display has a maximum of eight flights. The entry code A* may be used to display additional availability, as follows:

A*

Each time this entry is input, Apollo will display eight more lines, until there are no more flights to be displayed for the specified date.

Changing the Departure Time

When flight availability is displayed, the departure time can be changed as follows:

Format
A*<Alternative Time>

Example
A*5P

This example will redisplay availability for the same date and city pair, changing the departure time to 5 P.M. The time may be input in either the 12-hour or 24-hour format. However, it is always preferable to use as few keystrokes as possible.

Changing the Departure Date

The departure date of an existing availability display can be changed as follows:

Format
A*<Alternate Date>

Example
A*21MAY

This example will redisplay availability for the same city pair and time, changing the departure date to 21 May.

Changing the Board Point or Destination

The entry code A*B may be used to change only the board point of an existing availability display, as follows:

A*BLGA

This example will change the board point to LGA, without changing the destination.
The entry code A*D may be used to change only the destination, as follows:

A*DSEA

This will change the destination to Seattle, without changing the board point.

Redisplaying Original Availability

After a follow-up entry is input, the following entry may be used to redisplay the original availability screen:

A*R

Alternative Availability Entries

Various options may be used in a flight availability entry to customize the display.

Specifying a Connecting Point

A connecting point can be specified as follows:

A20OCTSTLHNL9ASFO

The connecting point is input at the end of the availability entry. This example will display connections on 20 October from St. Louis to Honolulu, connecting in San Francisco. The first connection displayed will be the one that originates from St. Louis closest to 9 A.M.

Displaying Availability by Arrival Time

Occasionally, the arrival time may be more important to a client than the departure time. In this situation, the arrival time can be specified as follows:

A12MAYYULLAXA10A

This example would be used to request flights on 12 May from Montreal to Los Angeles. The first flight displayed will be the one that arrives closest to 10 A.M.

First Availability by Booking Class

Availability can be requested in a specific booking class as follows:

A/Q2/17JUNSTLPAR

This example requests the first flight with 2 seats available in Q class.

Displaying Availability by Carrier

The following entry is used to display only flights operated by a specific carrier:

A25MARCHIHNL11A‡UA

Note that an end-item (‡) is typed before the carrier code. This example would be used to display only United Airlines flights from Chicago to Honolulu, departing at 11 A.M. on 25 March.

If an availability display has already been obtained, a carrier can be specified with a follow-up availability entry as follows:

A*‡AA

This example will redisplay availability for the same city pair, date, and time, showing only flights operated by American Airlines.

Excluding a Carrier

A carrier may be excluded in an availability display with the following entry:

A22AUGPITPHX9A-US

Note that a dash (-) is typed before the carrier code. This example will display flights departing at 9 A.M. on 22 August from Pittsburgh to Phoenix, showing all carriers except U.S. Airways.

If an availability display has already been obtained, a carrier can be excluded with a follow-up availability entry, as follows:

A*-HP

This entry will display flights of all carriers except America West.

Displaying Direct Flights

The option code /D may be included in an availability entry to display only direct flights, as follows:

A30MARBOSSFO9A/D

Review

1. If a departure date is not specified, Apollo will display flights for _____.

2. The entry code for flight availability is ____.

3. The equipment code M80 indicates a _____ aircraft.

4. Typing ___ before the time will display flights by arrival time, rather than departure time.

5. The date 6 March may be entered as _____ or _____.

6. The time 3.00 P.M. may be entered as _____ or _____.

7. Write the correct entry to display availability on 12 June from New York-LaGuardia (LGA) to Seattle (SEA), departing closest to 7 A.M.

8. Write the correct entry to display availability from Chicago-O'Hare (ORD) to Honolulu (HNL) on 18 September, departing closest to 10 A.M.

9. What entry would display availability on flights from Winnipeg (YWG) to Pittsburgh (PIT) on 6 February, departing closest to 3 P.M?

10. When an availability display is obtained, what entry will change the departure date to 24 March?

11. What entry will change the departure date to 16 June and also change the departure time to 11 A.M?

12. What entry will display opposite availability on 19 August, departing around 4 P.M?

13. What entry will change the board point to Chicago-Midway (MDW)?

14. What entry will change the destination to San Jose (SJC)?

15. Assume you have obtained an availability display for 22 June. What entry will display availability for the same city pair four days earlier?

16. Assume you have obtained an availability display for flights departing at 4 P.M. What entry will display availability for the same city pair and date, two hours earlier?

17. What code will appear in an availability display to indicate that a flight does not operate every day?

18. After availability has been displayed for direct flights only, what entry would be input to display additional flights?

Selling Air Segments

Objectives

After completing this unit, you will be able to:

1. Sell an air segment from a flight availability display.
2. Sell a connection.
3. Sell a specific flight without displaying availability.
4. Place a seat request on a carrier's waitlist.
5. Book an open segment.
6. Input a passive segment booked directly with a carrier.
7. Input an ARNK segment in an air itinerary that is interrupted by surface travel.

Booking an airline reservation is called selling an air segment. If the requested seats are not available, the reservation may be placed on a waitlist. If other passengers happen to cancel their reservations, the waitlisted seats may become confirmed.

Selling From Availability

The entry code 0 is used to sell air segments. The following format may be used to book a reservation from a flight availability display:

Format
0<Seats><Class><Line>

Example
01Y1

This example would be used to sell one seat in Y class on the flight in line 1 of the availability display.

If the agent attempts to sell more than the maximum number displayed, the reservation will not be confirmed immediately. A message will be sent to the carrier requesting the seats.

The class or booking code must be one of the valid classes shown in the availability display. If the class is sold out, the seats may be waitlisted. The procedure for entering a waitlisted segment will be discussed later in this chapter.

As an example, assume a client wants to travel from San Francisco to Chicago on 17 July. He would like to depart around 9A. The agent first displays availability, as follows:

A17JULSFOCHI9A

Apollo responds as follows:

```
FR 17JUL  P C
1* AA 142 F7 Y7 B7 H7 M7 V7 K7 W7 SFOORD  915A  305P 767 80
2‡ UA 820 F9 Y9 B9 Q9 M9 H9 V9    SFOORD 1045A  440P D10 70
3‡ UA 190 F9 Y9 B9 Q9 M9 H9 V9    SFOORD 1220P  614P 757 80
4‡ UA 128 F9 Y9 B9 Q9 M9 H9 V9    SFOORD  112P  715P D10 80
5* AA 224 F4 Y4 B4 H7 M7 V7 K7 W7 SFOORD  115P  720P 757 90
6‡ UA 130 F9 Y9 B9 Q9 M9 H9 V9    SFOORD  405P  955P 73S 80
7* AA 142 F4 Y4 B4 H7 M7 V7 K7 W7 SFOORD  915A  305P 767 90
8‡ UA 820 F9 Y9 B9 Q9 M9 H9 V9    SFOORD 1045A  440P D10 90
MEALS>A*M     CLASSES>A*C0     MORE>A*
```

The passenger requests three seats in Y class on the United flight departing at 10:45 A.M. The following entry may be used to book the reservation:

03Y2

Apollo responds as follows:

```
1 UA 820Y 17JUL SFOORD SS3 1045A  440P *
OFFER CAR/HTL       >CAL      >HOA
```

The response is an air segment. Each segment is numbered based on the order in which the flight was booked. The example above is segment 1, indicating that it is the first segment of the itinerary. The message "OFFER CAR/HTL" advises the agent that hotel and car bookings can be made for the destination city.

The air segment shows the carrier, flight number, class, departure date, board point, and off point. The segment status is displayed before the number of seats and the flight times. When the itinerary is redisplayed, the day of the week appears at the end of the segment. Each days is indicated by a two-character code, as follows:

MO	Monday
TU	Tuesday
WE	Wednesday
TH	Thursday
FR	Friday
SA	Saturday
SU	Sunday

The status code SS (sold/sold) indicates that the segment is confirmed. When the agent ends the transaction, the segment status will be changed to HK (hold confirmed).

If the number of seats requested exceeds the seat quota, the segment status will be NN, indicating that the seats will be requested from the carrier. The reservation will not be confirmed until a reply is received from the airline accepting the reservation. The status PN in an air segment indicates that the airline has not yet responded to the seat request.

Selling Connecting Flights

To sell connecting flight segments, the agent inputs the class and line number of each leg as follows:

02Y4Y5

This example would be used to sell two seats in Y class from line 4 and in Y class from line 5.

To illustrate, assume an agent just obtained the following availability display:

```
03MAY MO  M M
1 US1257 Y4 B0 K0 M0 H0 V0   ABQPHX  700A  805A 73S  0
2 US1026 Y4 B4 K4 M4 H4 V4      TUS  845A  920A 73S  0
3 US 599 Y4 B4 K4 M4 H4 V4   ABQPHX  840A  945A 73S  0
4 US1027 Y4 B4 K4 M4 H4 V4      TUS 1015A 1055A 73S  0
5 US 399 Y4 B4 K4 M4 H4 V4   ABQPHX 1200N  105P 73S  0
6 US 594 Y4 B4 K4 M4 H4 V4      TUS 1255P  130P 73S  0
```

Each segment of a connection is referred to as a leg. Assume the client wants to book one seat in K class on both legs of the connection that departs from Albuquerque at 8:40 A.M. The following entry may be used to sell the connecting flight segments:

01K3K4

Three-segment connections can be sold as follows:

01Y4Y5Y6

On a domestic connection, the class of service must be the same on all legs in order to obtain a throughfare. A throughfare is one fare applied to all the legs of a connection. Usually, a throughfare normally is lower than the combined fares of the segments if priced separately.

In some cases, discount classes such as V, Q, or M may be combined on different legs. To determine if different classes can be booked at a throughfare, the fare rules must be consulted. Fare rules are the restrictions governing each price category, or fare basis. You will learn how to display fare rules later.

The following entry may be used to book all legs of a connection in the same class:

01Y2*

This example could be used to sell one seat in Y class on all legs of a connection originating in line 2. Note that this entry can only be used if all legs are to be booked in the same class.

Waitlisting from Availability

Most carriers maintain a waiting list, or waitlist, for flights that are sold out. Passengers who desire seats on the flight are placed on the list, in case other passengers who hold confirmed reservations happen to cancel their reservations. A separate waitlist is kept for each booking class. If the waitlist is open, air segments are waitlisted automatically when an agent attempts to sell a sold-out class.

The option code LL is used to waitlist a reservation, as follows:

01Y2LL

When a segment is waitlisted, Apollo responds as follows:

```
UNABLE-HAVE WAITLISTED
1 CO 941Y 18NOV SFOPHX LL1 1055P 1245P *
```

The segment status LL indicates that the seats will be waitlisted. When the agent ends the transaction, the status will be changed to HL, signifying that the reservation has been waitlisted. (Segments are waitlisted automatically by AC and UA when a normal "sell" entry is input for a booking class that is sold out.)

In case the waitlisted segment is not confirmed later, a confirmed reservation should also be booked for the same city pair. If the waitlisted segment is later confirmed, the agent would then notify the passenger and cancel the USAir segment. When a waitlisted segment and a confirmed segment are booked over the same route, the waitlisted segment should be booked first (except in the rare occasion in which the confirmed flight departs earlier than the waitlisted flight.)

Displaying the Itinerary

The following entry is used to display the itinerary:

*I

Segments are displayed in order by segment number, as in the following example:

```
1 UA 465Y 12AUG DTWMIA LL1  710A  845A *         WE
2 UA 402Y 12AUG DTWORD SS1 1201P 1201P *         WE
3 UA 715Y 12AUG ORDMIA SS1  135P  455P *         WE
4 UA 105Y 17AUG MIADTW SS1  710A  845A *         MO
```

In this itinerary, one passenger is waitlisted on a direct flight from DTW to MIA and confirmed on a connection via ORD on the same date. The return flight on 17 August is a direct flight and is also confirmed.

Selling by Carrier and Flight Number

Often, seats can be sold on a specific flight without an availability display. The action code NN is used to book a flight by carrier and flight number, as follows:

Format
0<Carrier><Flight><Class><Date><Board point/off point>NN<seats>

Example
0CO201Y12MAREWRMIANN2

Note that the applicable airport code must be used for a multi-airport city. The action code NN (need/need) is input before the number of seats.

In this case, the number of seats requested was available, as indicated by the segment status SS. If the number of seats exceeds the carrier's seat quota, the segment status will be NN.

Waitlisting Seats with a Direct-Sell Entry

To waitlist with a direct-sell entry, the agent types the waitlist action code LL instead of NN. For example, assume you wish to waitlist 2 seats in Y class on NW 918 on 16 April from MKE to MIA. The following entry may used to direct-sell the segment:

0NW918Y16APRMKEMIALL2

Apollo responds as follows:

```
  1 NW 918Y 16APR MKEMIA LL2  800A 1145A
```

Note the segment status LL, indicating that the seats will be placed on the carrier's waitlist.

Open Segments

Occasionally, a passenger may book an itinerary without setting the exact departure time for an onward or return segment. In this situation, an open segment must be booked. An open segment is an unspecified flight on a specified carrier.

The direct-sell format is used to book an open segment. The word OPEN is typed in place of the flight number, and the action code NO (no action) is typed before the number of seats. The departure date is optional.

To illustrate, assume a client has already booked one seat in Y class from SFO to PIT. He would like to return on AA on 2 March, but does not yet know the exact departure time. The following entry may be used to book the open segment in Y class:

0AAOPENY2MARPITSFONO1

Apollo responds as follows:

```
2 AAOPENY 02MAR PITSFO NO1
```

Note in this example that the outbound segment has already been booked. Thus, the open segment is segment 2. An open segment cannot be the only air segment in the itinerary.

Passive Segments

Occasionally, air space must be booked directly with a carrier by telephone, rather than through Apollo. The direct-sell format can be used to record the segment in the passenger itinerary. This type of reservation is called a passive segment.

To enter a passive segment, the action code GK or BK may be used as follows:

0QF12C22SEPLAXSYDGK2

When a segment is booked with NN or LL, a message is sent to notify the carrier about the booking. However, when a passive segment is entered with GK or BK, no action is taken, because the reservation was made directly with the airline.

The following table summarizes various action codes used in direct-sell entries:

Code	Meaning	Action
HK	Confirmed	Enters a passive segment for a flight booked directly with a carrier.
NO	No action	Sells an open segment.
BK GK	Booked Group booking	Enters a passive segment for a flight booked directly with a carrier or wholesaler.
IN	If not holding, need	Re-requests seats from a carrier.
IX	If holding, cancel	Cancels seats previously requested from a carrier.
LL	List/list	Books a waitlisted segment.
NN	Need/need	Requests seats from a carrier.

Surface Segments

A surface segment is any segment in which the passenger will travel by a means other than air transportation. Examples of surface segments car, ship, or rail travel. In an air itinerary, an ARNK segment is input to indicate that the itinerary is interrupted by surface travel,

ARNK is an abbreviation for "arrival unknown." Whenever the board point of an air segment is different from the off point of the previous segment, an ARNK segment must be placed in the itinerary to maintain continuity.

For instance, assume a client will travel from Chicago-O'Hare to Miami on a Continental flight. The passenger will travel by ship from Miami to St. Thomas before boarding a return flight to Chicago. This itinerary includes two city pairs, as follows:

1. ORDMIA
2. STTORD

The off point of segment 1 is MIA, but the board point of segment 2 is STT. To maintain continuity in the itinerary, an ARNK segment must be placed between these air segments. The ARNK segment signifies that the trip is interrupted by another form of transportation.

The following entry is used to input an ARNK segment:

Y

To illustrate, assume a client will travel from Milwaukee to Des Moines but will drive to Omaha before boarding a return flight. In this itinerary, an ARNK segment would be booked after the Milwaukee-Des Moines segment and before the Omaha-Milwaukee segment, as follows:

```
1 NW  47Y 01JUL MKEDSM SS2  910A  1010A        MO
2 ARNK
3 NW 197Y 08JUL OMAMKE SS2  720P   750P        MO
```

An ARNK segment is required whenever an air itinerary is interrupted by a surface segment.

Review

Refer to the following entry to answer questions 1 through 3:

03Y2

1. In what class is the airline space being booked?

2. How many seats are being sold?

3. What line number in the availability display lists the flight on which the seats will be booked?

Refer to the following availability display to answer questions 4 through 6:

```
 1* US 474 Y7 B0 M0 H0 Q0 V0 K0 MSPCLT 1030A  148P 73S  0
 2‡ DL 277 F7 Y7 B0 M0 Q0 V0 L0 MSPATL  755A  914A 727  0
 3‡ DL 164 F7 Y7 B0 M0 Q0 V0 L0    CLT 1112A 1205P 72S  0
 4* AA 302 F7 Y7 W0 M0 B0 H0 Q0 MSPORD  800A  912P 72S  0
 5* AA 227 F7 Y7 W0 M0 B0 H0 Q0    CLT 1115A  149P D9S  0
```

4. What entry will sell 4 seats in Y class on the direct flight?

5. What entry will sell 2 seats in Y class on both legs of the connection that departs at 8:00 AM?

6. What entry will sell one seat in first class both legs of the connection that arrives at CLT at 12:05 PM?

Refer to the following flight segment to answer questions 7 through 11:

```
      1 UA 914Q 13JUL IADCDG SS3  835P  805A *       WE
```

7. In what class of service are the passengers booked?

8. How many passengers are in the party?

9. On what week day will the party be traveling?

10. From what city does the flight depart?

11. What time is the flight scheduled to arrive at the destination airport?

12. Write the correct entry to sell one seat in first class on both legs of a two-leg connection originating in line 3:

13. Write the correct entry to sell 3 seats in B class on a on a flight in line 2 and in M class on the onward connecting flight in line 3.

14. What entry would direct-sell one seat in Y class on CO 1297 on 13 December from OMA to IAH?

15. Write the direct-sell entry to book one seat in B class on AA 596 on 15 September from RNO to SMF.

16. What entry would book 3 seats in Y class on BA 40 on 22 April from LAX to LHR?

17. What entry would book four seats in Y class on CP 800 on 5 January from YYZ to YOW?

18. Write the entry to waitlist one passenger in Y class on DL 3801 on 15 December from CLE to MKE:

19. What term is used to describe a segment inserted in an itinerary to maintain continuity for pricing, when the destination of one air segment is different from the origin of the next air segment?

20. What entry will input the type of segment described in question 19?