IMPORT json

#PROGRAM READ DATA FROM HELLOWORLD.JSON AND DEFINE THE SIZE OF THE DATA

BEGIN

DEFINE import\_file()

TRY

WITH OPEN('Hello world.json') AS f

RETURN json.load(f)

EXCEPT FileNotFoundError

data = []

FOR i IN RANGE(16)

data.append([[[0]\*10, [0]\*40],[[0]\*10, [0]\*40],[[0]\*10, [0]\*40],[[0]\*10, [0]\*40]])

RETURN data

ENDFOR

ENDTRY

ENDDEFINE

END

#PROGRAM SAVE DATA

BEGIN

DEFINE export\_file(data)

WITH OPEN('Hello world.json','w') AS f

json.dumpdata,f

data=import\_file

ENDEFINE

END

#PROGRAM MENU OF M

BEGIN

DEFINE M

Print ‘‘‘FERRY TICKETING SYSTEM

P - to Purchase Ticket

V - to View Seating Arrangement

Q - to Quit the system’’’

READ x

RETURN x

ENDDEFINE

END

#PROGRAM MENU OF P

BEGIN

DEFINE P

Print ‘‘‘PURCHASING MODULE

B - to purchase ticket for Business class

E - to purchase ticket for Economy class

M - to return to Main Menu’’’

READ y

RETURN y

ENDDEFINE

END

#PROGRAM FINE EMPTY SEATS

BEGIN

DEFINE find\_empty\_seat(schedule,Class)

FOR i IN RANGE(4)

IF Class == 'B'

seats=schedule[i][0]

ELSE

seats=schedule[i][1]

ENDIF

ENDFOR

FOR j IN RANGE(len(seats))

IF seats [j]==0

RETURN i , j

ENDIF

ENDFOR

RETURN -1,-1

ENDFOR

ENDDIFINE

END

#PROGRAM TO SHOW AND SELECT SHIP SCHEDULE

BEGIN

DEFINE V

DOWHILE TRUE

PRINT ‘‘‘

Please select your ship number.

Enter M to go back!

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* FERRY ID ROUTE SCHEDULE TIME \*

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* Ferry 1,2,3,4 Penang->Langkawi 0 10:00 AM\*

\* Ferry 5,6,7,8 Penang->Langkawi 1 11:00 AM\*

\* Ferry 1,2,3,4 Penang->Langkawi 2 12:00 AM\*

\* Ferry 5,6,7,8 Penang->Langkawi 3 01:00 PM\*

\* Ferry 1,2,3,4 Penang->Langkawi 4 02:00 PM\*

\* Ferry 5,6,7,8 Penang->Langkawi 5 03:00 PM\*

\* Ferry 1,2,3,4 Penang->Langkawi 6 04:00 PM\*

\* Ferry 5,6,7,8 Penang->Langkawi 7 05:00 PM\*

\* Ferry 5,6,7,8 Langkawi->Penang 8 10:00 AM\*

\* Ferry 1,2,3,4 Langkawi->Penang 9 11:00 AM\*

\* Ferry 5,6,7,8 Langkawi->Penang 10 12:00 AM\*

\* Ferry 1,2,3,4 Langkawi->Penang 11 01:00 PM\*

\* Ferry 5,6,7,8 Langkawi->Penang 12 02:00 PM\*

\* Ferry 1,2,3,4 Langkawi->Penang 13 03:00 PM\*

\* Ferry 5,6,7,8 Langkawi->Penang 14 04:00 PM\*

\* Ferry 1,2,3,4 Langkawi->Penang 15 05:00 PM\*

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

’’’

ENDDO

ENDDEFINE

READ t

IF t == 'M'

RETURN t

ENDIF

t = int(t)

IF (t < 0) OR (t > 15)

CONTINUE

RETURN t

ENDIF

END

#PROGRAM TO SHOW SEAT

BEGIN

FROM datetime IMPORT date

stars='\*'\*41

DEFINE print\_seats(data,schedule\_id,ferry\_id)

b,e=data[schedule\_id][ferry\_id]

s=' '

s=s+stars+'\n'

s=s+'\*Ferry ID: ' + str(ferry\_id) + 'Date:' + date.today().strftime('%d %b %Y') + '\*\n'

s=s+stars+'\n'

s=s+'\* Business class \*\n'

s=s+stars+'\n'

FOR j IN RANGE(2)

FOR i IN RANGE(5)

s=s+'\* '+str(b[j\*5+i])+' '

ENDFOR

s=s+'\* \n'

s=s+stars+'\n'

s=s+'\* Economy class \*\n'

s=s+stars+'\n'

ENDDO

FOR J IN RANGE(8)

FOR I IN RANGE(5)

s=s+'\* '+str(e[J\*5+I])+' '

ENDFOR

s=s+'\*\n'

s=s+stars+'\n'

PRINT(s)

ENDFOR

ENDDEFINE

END

#PROGRAM PRINT TICKET

BEGIN

DEIFINE print\_ticket(c, i,schedule\_id,ferry\_id)

READ name (‘Please enter your name’)

READ passport\_no (‘Please enter your passport NO.’)

IF (schedule\_id <= 7) AND (schedule\_id % 2) OR (schedule\_id > 7) AND (schedule\_id % 2 == 0: ferry\_id += 4)

ENDIF

PRINT(You have purchased a business class)

PRINT(\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*)

PRINT(\* WELCOME TO THE TRIP! \*)

PRINT(\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*')

PRINT(\*Schedule NO: {: <15}\*.format(schedule\_id))

PRINT(\*Ferry ID: {: <15}\*.format(ferry\_id+1))

PRINT(\*Name: {: <15}\*.format(name))

PRINT(\*Passport NO: {: <15}\*.format(passport\_no))

PRINT(\*Seat Number: {: <15}\*.format(c + str(i+1)))

PRINT(\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*)

ENDDEFINE

END

#PROGRAM PURCHASE TICKET

BEGIN

WHILE True

userinput =M()

IF userinput=='P'

WHILE True

schedule\_id = V()

IF schedule\_id =='M'

BREAK

ENDIF

PRINT ‘Please select which kinds of class you want to purchase!’

userinput=P()

IF userinput=='B'

ferry\_id,n=find\_empty\_seat(data[schedule\_id], 'B')

IF n == -1

PRINT ‘‘‘Business Class is full!

Press E to select an Economy seat!

Press M to return to the previous menu!’’’

userinput = READ()

IF userinput=='E'

ferry\_id,m=find\_empty\_seat(data[schedule\_id], 'E')

IF m==-1

PRINT '''Ticket sold out for this hour!

Next trip leaves in 1hour!

Please select another schedule!''')

ENDIF

ELSE

print\_ticket(userinput, m,schedule\_id,ferry\_id)

data[schedule\_id][ferry\_id][1][m]=1

export\_file(data)

ELSE

PRINT ‘Sorry!Next trip leaves in 1 hour’

ENDIF

ELSE

print\_ticket(userinput, n,schedule\_id,ferry\_id)

data[schedule\_id][ferry\_id][0][n]=1

export\_file(data)

ENDIF

ENDIF

ELSE

IF userinput=='E'

ferry\_id,m=find\_empty\_seat(data[schedule\_id], 'E')

IF m == -1

PRINT ‘‘‘Economy Class is full!

Press B to select a Business seat!

Press M to return to the previous menu!’’’

userinput=READ()

IF userinput=='B'

ferry\_id,n=find\_empty\_seat(data[schedule\_id], 'B')

IF n==-1

PRINT'''Ticket sold out for this hour!

Next trip leaves in 1hour!

Please select another schedule!''')

ENDIF

ELSE

print\_ticket(userinput, n,schedule\_id,ferry\_id)

data[schedule\_id][ferry\_id][0][n]=1

export\_file(data)

ELSE

PRINT ‘Sorry! Next trip leaves in 1 hour’

ENDIF

ELSE

print\_ticket(userinput, m,schedule\_id,ferry\_id)

data[schedule\_id][ferry\_id][1][m]=1

export\_file(data)

ENDIF

ELSE

IF userinput=='M'

BREAK

ENDIF

ENDIF

ENDIF

ENDWHILE

ELSE

IF userinput=='V'

PRINT ‘Please select your Ferry ID’

schedule\_id=V()

IF schedule\_id=='M'

CONTINUE

ENDIF

ferry\_id = int(input('Enter ferry ID: ')) - 1

IF (ferry\_id >3)

ferry\_id-=4

ENDIF

print\_seats(data,schedule\_id,ferry\_id)

ENDIF

ELSE

IF userinput=='Q':

PRINT'Thank you for visiting!'

BREAK

ENDIF

ELSE

PRINT ‘Error’

ENDIF

PRINT 'Have a nice trip'

END