

EGN 3211 – Fall 2021

ASSIGNMENT

Write a program for “AMCD Travels and Tour” which prints the monthly bill for their customers. The company uses AI bots to book cheap flights, hotels, and rental cars from auction and manages itinerary of frequent travelers. The company allows the customer to build their own bundles by selecting the package for each service available. If the customer subscribes to more than one service, he is eligible for a 5% discount on their monthly bill. The packages available are given as follows:

Service 1 - Flights

[1] - Silver: \$29.99/month

- Up to 30% off – in economy and premium economy
- Upgrade to Premium Economy after 50k miles
- Joining bonus 30k miles

[2] - Gold: \$39.99/month

- Up to 50% off – in premium economy and business class
- Upgrade to First Class after 100k miles
- Joining bonus 50k miles

[3] - Platinum: \$49.99/month

- Up to 70% off – in premium, business, and first class
- Upgrade to Business Class after 150k miles
- Joining bonus 70k miles

Service 2 – Rental Cars

[1] - Economy: \$19.99/month

- Auto Rental Collision Damage Waiver
- Free road-side assistance
- Choose your ride: from economy sedan to luxury SUV with up to 20% off

[2] - Deluxe: \$29.99/month

- Auto Rental Collision Damage Waiver
- Free road-side assistance
- Choose your ride: from economy sedan to luxury SUV with up to 40% off

[3] - Premium: \$39.99/month

- Auto Rental Collision Damage Waiver
- Free road-side assistance
- Choose your ride: from economy sedan to luxury SUV with up to 70% off

Service 3 - Hotels

[1] - Basic: \$59.99/month

- Free 1 Night stay
- Cab Services Included
- Cancel Anytime & Full Refund

[2] - Supreme: \$99.99/month

- Free 3 Night Stay
- \$50 Annual Ultimate Rewards
- Cab Services Included
- Cancel Anytime & Full Refund

Flights Optional Service (Free on-flight Wifi)

The customer may use Free on-flight Wifi with their hosting. The price is as follows:

[1] – First 3 flights - \$2.99/month

[2] - All flights - \$6.99/month

Gathering the information from the customer

Prompt the customer to select the package for each of the available services:

- Flights
- Rental Cars
- Hotels

Valid packages are only those available for the selected service:

- Packages 1, 2 or 3 for Flights
- Packages 1, 2 or 3 for Rental Cars
- Packages 1 or 2 for Hotels
- Option 1 or 2 for Flights Optional Service (Free Wifi)

If customer selects Flights Optional services, they **MUST** also choose Free Wifi type from either of the following

- First 3 flights
- All flights

Calculating the Amount Due

Once all the information is collected, calculate the amount of the monthly bill as follows:

- Hotel cost is the cost of the selected package
- Rental Cars cost is a cost of the selected package
- Flight cost is a cost of the selected package + Free Wifi type

Total cost is calculated by adding the cost of all selected services.

Bundle discount is 5% off the total cost. It only applies if more than one service is selected.

Taxes are calculated by adding 8% to the total cost (after deducting bundle discount if applies)

Amount due is calculated by adding Taxes to the total cost.

Displaying the bill

Please see the sample runs below for the format of the bill.

Sample run 01 - Select Service 1 and 2:

Welcome to AMCD Tours and Travels Inc.

Would you like to subscribe to Flights? (Y or N): **Y**

Choose package 1, 2 or 3: **1**

Choose Free Wifi type: First 3 flights (1) or All flights (2): **1**

Would you like to subscribe to Rental Car Service? (Y or N): **Y**

Choose package 1, 2 or 3: **1**

Would you like to subscribe to Hotel? (Y or N): **N**

Output: (Notice that the figures in the bills are not necessarily accurate).

AMCD TOURS AND TRAVELS INC Bill Details

Service	Package	Cost	
Flights	1	\$29.99	NOTE: \$ symbol and decimal points should line up in column
First 3 flights	1	\$ 2.99	
Rental Car	1	\$19.99	
Subtotal:		\$51.97	
Bundle Discount:	5%	\$ 2.60	
Total Before Tax		\$49.37	
Tax	8%	\$ 3.95	
Amount Due:		\$53.32	

Sample run 02 - Select Service 1, 2 and 3:

Welcome to AMCD Tours and Travels Inc.

Would you like to subscribe to Flights? (Y or N): **Y**

Choose package 1, 2 or 3: **3**

Choose Free Wifi type: First 3 flights (1) or All flights (2): **2**

Would you like to subscribe to Rental Car Service? (Y or N): **Y**

Choose package 1, 2 or 3: **2**

Would you like to subscribe to Hotel? (Y or N): **Y**

Choose package 1 or 2: **1**

Output:

AMCD TOURS AND TRAVELS INC Bill Details

Service	Package	Cost
Flights	3	\$49.99

All Flights	2	\$ 6.99
Rental Car	2	\$29.99
Hotel	1	\$59.99
Subtotal:		\$146.99
Bundle Discount:	5%	\$ 7.35
Total Before Tax		\$139.64
Tax	8%	\$ 11.17
Amount Due:		\$150.81

Sample run 03 - Select Flights (Service 1) only Welcome to
 AMCD Tours and travels Inc.

Would you like to subscribe to Flights? (Y or N): **Y**

Choose package 1, 2 or 3: **3**

Choose Free Wifi type: First 3 flights (1) or All flights (2): **2**

Would you like to subscribe to Rental Car Service? (Y or N): **N**

Would you like to subscribe to Hotel? (Y or N): **N** **Output:**

AMCD TOURS AND TRAVELS INC Bill Details

Service	Package	Cost
Flights	2	\$49.99
All Flights	1	\$ 6.99
Subtotal:		\$56.98
Bundle Discount:	5%	\$ 0.0
Total Before Tax		\$56.98
Tax	8%	\$ 4.56
Amount Due:		\$61.54

Submission Instructions

You need to submit .c file and pdf file. Save your code to a file named “monthlybill.c” and submit it with a pdf file. The pdf file must include three snapshots of the cmd screen for three different scenarios of service selection. You can also include the source code exported from DevC++ and any comments about your program(optional).

Your program MUST include the following comment:

/ Student Assignment Submission Form*

*I declare that the attached assignment is wholly my own work in accordance with UCF Academic Policy. No part of this assignment has been copied manually or electronically from any other source (including web sites) or distributed to other students. My name is : LastName FirstName , Date: mm/dd/yyyy */*