

CSC 211 Intermediate Programming

Lab2

Review Functions

High Adventure Travel Agency

The High Adventure Travel Agency offers four vacation packages for thrill-seeking customers. The rates and options vary for each package. You've been asked to write a program to calculate and itemize the charges for each package, described as follows:

Devil's Courthouse Adventure Weekend: An action-packed **three-day weekend** spent camping, rock climbing, and rappelling at Devil's Courthouse, North Carolina. This getaway is for novices and experts alike. Optional climbing instruction is available to beginners at a low price. Camping equipment rental is also available.

Rates

Base Charge:	\$380 per person
Climbing Instruction:	\$150 per person
Equipment Rental:	\$50/day per person

Scuba Bahama: A week-long cruise to the Bahamas with **three days of scuba diving**. Those with prior experience may dive right in, while beginners should choose to take optional, but very affordable lessons.

Rates

Base Charge:	\$1200 per person
Scuba Instruction:	\$120 per person

Sky Dive Colorado: **Four thrilling days** with expert sky-diving instructors in Colorado Springs, Colorado. For lodging, you may choose either the Wilderness Lodge or the Luxury Inn. (Instruction is included for all members of the party.)

Rates

Base Charge:	\$500 per person
Lodging at Wilderness Lodge:	\$70/day per person
Lodging at Luxury Inn:	\$150/day per person

Barron Cliff Spelunk: **Eight days** spent hiking and exploring caves in the Barron Cliff Wilderness Area, Tennessee. Camping equipment rental is available.

Rates

Base Charge:	\$600 per person
Equipment Rental:	\$50/day per person

NOTE:

- A 10 percent discount on the base charges of any package is given for a party of five or more.
- Required deposit is 50% of Total Charge.

Variables

Table 1

Variable	Description
<code>climbRate = 380.00</code>	A <code>double</code> . Holds base rate of Devil's Courthouse Adventure Weekend package.
<code>scubaRate = 1200.00</code>	A <code>double</code> . Holds base rate of Scuba Bahamas package.
<code>skyDiveRate = 500.00</code>	A <code>double</code> . Holds base rate of Sky Dive Colorado package.
<code>caveRate = 600.00</code>	A <code>double</code> . Holds base rate of Barron Cliff Spelunk package.
<code>climbInstruct = 150.00</code>	A <code>double</code> . Holds charge for rock climbing instruction.
<code>scubaInstruct = 120.00</code>	A <code>double</code> . Holds charge for scuba instruction.
<code>dailyCampRental = 50.00</code>	A <code>double</code> . Holds daily charge, per person for equipment rental.
<code>dayLodge1 = 70.00</code>	A <code>double</code> . Holds daily cost of lodging option 1 of Sky Dive Colorado package. (Wilderness Lodge.)
<code>dayLodge2 = 150.00</code>	A <code>double</code> . Holds daily cost of lodging option 2 of Sky Dive Colorado package. (Luxury Inn.)

Functions you must use

Table 2

Function Name	Description
<code>main</code>	Calls the menu function and dispatches program control to the appropriate module, based on the user's choice of packages.
<code>menu</code>	Displays a menu listing the vacation packages. Allows the user to enter a selection, which is returned to the main function.
<code>climbing</code>	Asks the user for data necessary to calculate charges for the Devil's Courthouse Adventure Weekend package.
<code>scuba</code>	Asks the user for data necessary to calculate charges for the Scuba Bahamas package.
<code>skyDive</code>	Asks the user for data necessary to calculate charges for the Sky Dive Colorado package.
<code>spelunk</code>	Asks the user for data necessary to calculate charges for the Barron Cliff Spelunk package.

Pseudocode of each program function

Constants for the charges

Function prototypes

main ()

Do while user does not enter 5

Switch (User Input)

Case 1: Call Climbing

Case 2: Call Scuba

Case 3: Call SkyDive

Case 4: Call Spelunk

End Switch.

End Do-While

End of Main

Climbing:

Input number in party needing instruction.

Input number of advanced climbers in party.

Input number in party renting equipment.

Calculate base charges.

Calculate discount.

Calculate cost of instruction.

Calculate cost of equipment rental.

Calculate total charges.

Calculate minimum required deposit.

Display results.

End of Climbing

Scuba:

Input number in party needing instruction.

Input number of advanced scuba divers in party.

Calculate base charges.

Calculate discount.

Calculate cost of instruction.

Calculate total charges.

Calculate minimum required deposit.

Display results.

End of Scuba

SkyDive:

Input number in party.

Calculate base charges.

Calculate discount.

Input number in party staying at Wilderness Lodge.

Input number in party staying at Luxury Inn.

Calculate lodging charges.

Calculate total charges.

Calculate minimum required deposit.

Display results.

End of SkyDive

Spelunk:

Input number in party.

Input number in party renting equipment.

Calculate base charges.

Calculate discount.

Calculate cost of equipment rental.

Calculate total charges.

Calculate minimum required deposit.

Display results.

End of Spelunk

Outputs Required

There is an example of the program output.

- Your **first output** should contain **the same user choices for all of the functions** (*climbing, scuba, skydive, spelunk*) as shown in the **output example**.
- Your second output set should contain different user choices for all options (*climbing, scuba, skydive, spelunk*) where each one is different than **5**. **Do not use 0 as <enter> value.**