

HW #3

Due Sat., Oct. 3 at 11:59 PM

11. Internet Service Provider, Part 1

An Internet service provider offers three subscription packages to its customers, plus a discount for nonprofit organizations:

- Package A: 10 hours of access for \$9.95 per month. Additional hours are \$2.00 per hour.
- Package B: 20 hours of access for \$14.95 per month. Additional hours are \$1.00 per hour.
- Package C: Unlimited access for \$19.95 per month.
- Nonprofit Organizations: The service provider gives all nonprofit organizations a 20% discount on all packages.

The user should select the package the customer has purchased (from a set of radio buttons) and enter the number of hours used. A check box captioned *Nonprofit Organization* should also appear on the form. The application should calculate and display the total amount due. If the user selects the *Nonprofit Organization* check box, a 20% discount should be deducted from the final charges. Implementation note: all rates, limits, and discounts must be declared using symbolic constants (using the `const` keyword).

*Input validation:* The number of hours used in a month cannot exceed 744. The value must be numeric.

Use the following data to determine if the application is calculating properly:

Package and Hours	The Monthly Charge
Package A, 5 hours, nonprofit	\$ 7.96
Package A, 25 hours	\$39.95
Package B, 10 hours, nonprofit	\$11.96
Package B, 25 hours	\$19.95
Package C, 18 hours, nonprofit	\$15.96
Package C, 25 hours	\$19.95

You can do Part 2 FOR EXTRA CREDIT

12. Internet Service Provider, Part 2 (Advanced)

Make a copy of your solution program from Programming Challenge 11. Then, using the copied program, modify it so the form has a check box captioned *Display Potential Savings*. When this check box is selected, the application should also display the amount of money that Package A customers would save if they purchased Package B or C, or the amount that Package B customers would save if they purchased Package C. If there would be no savings, the message should indicate that.

Use the following test data to determine if the application is calculating properly:

Package and Hours	Total Monthly Savings
Package A, 5 hours, nonprofit	\$7.96, no savings with Packages B or C
Package A, 25 hours	\$39.95, save \$20.00 with Package B, and save \$20.00 with Package C
Package B, 10 hours, nonprofit	\$11.96, no savings with Package C
Package B, 25 hours	\$19.95, no savings with Package C