

Practice Exercises - Chapter: 02

* Exercise 2.1:

Write a program that prompts a user for two integers num1, num2 and print out the sum of them.

Solution 2.1:

```
#include <iostream>
using namespace std;
int main()
{
    int num1;
    int num2;
    int total;
    cout << "Enter first number : ";
    cin >> num1;
    cout << "Enter second number : ";
    cin >> num2;
    total = num2 + num1;
    cout << "Total is : " << total;
    return 0;
}
```

* Exercise 2.2:

Restaurant Bill

Write a program that computes the tax and tip on a restaurant bill for a patron with a \$88.67 meal cost. The tax is 6.75 percent of the meal cost and the tip is 20 percent of the meal cost after adding the tax. Display the total cost, tax amount, tip amount, and total bill on the screen.

Solution 2.2:

```

#include<iostream>
using namespace std;

int main()
{
    double tax, tip, tbill, meal_cost = 88.67;
    tax  = meal_cost * .0675;
    tip  = (meal_cost + tax) * .20;
    tbill = meal_cost + tax + tip;
    cout << "Meal cost = $" << meal_cost << endl;
    cout << "Tax amount = $" << tax << endl;
    cout << "Tip amount = $" << tip << endl;
    cout << "Total bill = $" << tbill << endl;
    return 0;
}

```

*** Exercise 2.3:**

Future Ocean Levels

During the past decade ocean levels have been rising faster than in the past, an average of approximately 3.1 millimeters per year. Write a program that computes the ocean levels expected to rise in the next 20 years if they continue rising at this rate. Display the result in both centimeter and inch measures.

Solution 2.3:

```

#include <iostream>
using namespace std;

int main()
{
    double rise_cm, rise_in, rise_mm = 3.1 * 20;
    rise_cm = rise_mm * 0.1;
    rise_in = rise_mm * 0.0393701;
    cout << "During the next 20 years ocean levels are expected  
to rise:\n";
    cout << rise_cm << " centmeters per year.\n";
    cout << rise_in << " inches per year.\n";
}

```

```
    return 0;  
}
```

*** Exercise 2.4:**

Write a program to swap values of two variables.

*** Exercise 2.5:**

Write a program that prompts a user for two integers and performs all arithmetic operations (addition, subtraction, multiplication and division).

*** Exercise 2.6:**

Write a program that prompts a user for radius of a circle and computes the perimeter and the area of the circle.

*** Exercise 2.7:**

Write a program that prompts a user for height and width of a rectangle and then computes the perimeter and the area of the rectangle.

*** Exercise 2.8:**

Write a program that prompts a user for an integer and computes the number of years, months and days from the entered number, assuming that all months have 30 days and all years have 365 days.

For example:

Number of days: 1329

Expected output

Years: 3

Months: 7

Days: 24

*** Exercise 2.9:**

Write a program that prompts a user for two angles of a triangle and computes the third one.

For example:

Sample Input

50 70

Sample Output

60

*** Exercise 2.10:**

Write a program that prompts a user for hours and minutes and then calculates the number of minutes from the entered values.

For example:

Sample Input

5 37

Sample Output

337