# Practice Exercises - Chapter: 03

*** Exercise 3.1: Display ASCII code.**

Write a program to input a character and display its ASCII code.

**Solution 3.1:**

```
#include <iostream>
using namespace std;

int main()
{
    char ch;

    cout << "Enter a character: ";
    cin >> ch;
    cout << "Its ASCII value: " << static_cast<int>(ch);
    // Another way:  cout << "Its ASCII value: " << int(ch);

    return 0;
}
```

*** Exercise 3.2: Convert real number to integer number.**

Write a program to input a real number (type “double”), then convert it to an integer (type “int”) and display the result.

**Solution 3.2:**

```
#include <iostream>
using namespace std;

int main()
{
    double num_double;

    cout << "Enter a real number: ";
    cin >> num_double;
    cout << "Result of converting to an integer: " << int(num_double);

    return 0;
}
```

*** Exercise 3.3: Display a VKU welcome message.**

Write a program to input a full name and then display a VKU welcome message with this full name.

**Solution 3.3:**

```
#include <iostream>
#include <string>
using namespace std;

int main()
{
    string fullName;

    cout << "Type your full name: ";
    getline(cin, fullName);
    cout << "Welcome " << fullName << " to VKU!";

    return 0;
}
```

*** Exercise 3.4:**

Write a program to enter a string from the keyboard and print the length of that string to the screen.

*** Exercise 3.5:**

If a car has an initial velocity called “v0”, an acceleration called “a” and a time called “t”.

Write a C++ program to find the final speed of the car and print the result to the screen.

Hint:

Use the cin command to enter the corresponding values for “v0”,” a”, and “t”.

Use the formula v = v0 + a.t to calculate the final velocity

*** Exercise 3.6:**

Write a C++ program to print out the following output:

| Gtri x | Gtri y | Bieu Thuc | Ket qua |
|---|---|---|---|
| 18 | 2 | A=y+3 | A=5 |
| 18 | 2 | B=y-2 | B=0 |
| 18 | 2 | C=y*5 | C=10 |
| 18 | 2 | D=x/y | D=9 |
| 18 | 2 | E=x%y | E=0 |

*** Exercise 3.7:**

Write a C++ program to input two integers “x”,” y”, then calculate: p=x*y, s=x+y, q=s2+p(sx)*(p+y) and print out the result to the screen.

*** Exercise 3.8:**

Write a program to enter degree of an angle, calculate and print to the screen sine, cosine, tangent and cotangent values corresponding to this angle.

*** Exercise 3.9:**

Write a program to input exam scores, midterm exam scores, and final exam scores, then calculate the total score and print the results to the screen as follows:

==========Diem kiem tra==========

Nhap diem kiem tra 1:10

Nhap diem kiem tra 2:9

Nhap diem kiem tra 3:10

==========Diem thi giua ky==========

Nhap diem thi giua ky:8.5

==========Diem thi cuoi ky==========

Nhap diem thi cuoi ky:10

Tong diem kiem tra: 29

Diem thi giua ky: 8.5

Diem thi cuoi ky: 10

.....

*** Exercise 3.10:**

Write a program to enter a two-digit number, calculate total of two digits and print the result to the screen.