

Project 1

The Amusement Park Problem – Part I

Write a C++ program for an amusement park to display the bill for the cashier. The pricing schedule is as follows:

Category	Price
Children	\$ 12.00 each
Adults	\$ 20.50 each

Write a program that accepts the number of people in each of the two age categories, performs the necessary computations, and displays a bill for the group's admission similar to the display below. After displaying the total bill, the program requests the cash received and calculates the change. Be sure to test for a variety of values. You may assume the cash payment is equal to or greater than the total bill.

Use the *amuseOne.cpp* file as a template for this project. This code will help you organize your first project. Be sure to delete my comments.

Here is a sample display after two values are entered:

```
Chesapeake Amusement Park
Enter children tickets...4
Enter adult tickets.....3

Chesapeake Amusement Park
-----
Children  Tickets      Price      Total
Adults    4           12.00     48.00
          3           20.50     61.50
Total Bill                                109.50
Cash received.....120
Change                                10.50
```

Purpose of this project

Develop C++ program with the following features:

- Constants and variables
- Input data
- Calculations including totals
- Output display with readable formatting

Advice from the Instructor:

- Review the information listed with the **Projects** link.
- Chapter Two in the text contains information on all the C++ tools you need.
- The *Chapter Two Notes* contain the code for the *Payroll Problem*. This sample uses all the elements you need for Project One.
- As you work on Project One, only code the input, calculation, and output for children. Don't add the code for adults until the child code works.

This will eliminate a lot of frustration as you work.

- Problems that students have with this project:
 - Don't set up constants (see Chapter 2.5 Naming Constants).
 - Don't align the decimals in the output (see Chapter 2.2 Formatting for Numbers with a Decimal Point and *Formatting for Numbers with a Decimal Point* in the *Chapter Two Notes*).
 - Don't review the Class Standards.



CSIT 210 *Introduction to Programming* (Java) is a prerequisite for this course. You will find that C++ statements are very similar to Java so you can rely on your Java skills in this class. The variables, constants, and calculations are the same. The major difference is in the input/output statements and the output formatting.