

UNIVERSITY *of* MARYLAND
UNIVERSITY COLLEGE - *Asian Division*

Project 3: Casino Chip Counting Program

Objective:

In this lab you will write a C++ programming language program that utilizes input, output, and conditional statements. The program is due the last class of the 6th week.

Program Requirements:

A gambling casino in Tinian, CNMI needs a program that will run on their accounting computer system. Good programmers are hard to find in Micronesia so they have approached you. C++ has been chosen for the programming environment, because of its excellent portability between computing platforms.

The program must satisfy the new US Federal IRS Overseas Requirement that if the gambler is a U.S. Citizen twenty percent of gambling winnings, must be withheld when cashing in chips at the cashier's window. Additionally, the casino wants to have the chip counting automated. The casino has agreed to pay you one red chip per hour until you complete the program.

Therefore, the program must meet the following specifications:

1. All program code must be C++.
2. The program will prompt to determine if gambler is a U.S. Citizen.
3. The program will then prompt for the gambler's Social Security Number only if the gambler is a U.S citizen.
4. Then it will prompt for the amount of cash the gambler started with by requesting a receipt for the chips purchased.
5. Then the program will prompt for total of chips in the following denominations and compute the total value of chips. A running total would be nice but is not required.
 - a. Black = \$5
 - b. Blue = \$20
 - c. Red = \$50
 - d. Green = \$100
6. The program will compute the total value of chips.
7. The program will then subtract this amount from the total amount the gambler started with to determine the amount won.
8. Per IRS regulations, 20% will be withheld from the winnings.
9. The program will send to Standard Output the appropriate output dependent on entered data.

Programming Notes:

1. Since the smallest denomination is \$5. You can use an integer variable to store the total and the divide by 5 to calculate the 20% withholding tax.

PROJECT REPORT:

Submit a project report with the following items: cover sheet, program specifications section, algorithm specifications section (include equations and flow chart), known test data section for six runs, source code, and sample output for several runs with known test data which should verify the program works. Also provide a conclusion section which describes how the program went and known problems.

Note as specified on the Syllabus a grade of 80% will be awarded for minimally fulfilling all program specifications. To exceed an 80% grade you must exceed the requirements and neatness does count. The program is due at the beginning of class and late reports will be reduced 25% for each class period late.