CMIS 242: Intermediate Programming
Project 4: Event Driven Programming and GUI Design

Summary:

Project 4 is worth 100 points and is due the first class of Week 7.

Do the program incrementally starting with the GUI design and coding first. The GUI should be well designed, requiring a minimal amount of user interaction and be intuitive for the user to understand. The GUI should also be well formatted using appropriate fonts and colors.

After you created the GUI then create the Event Driven processing using Event Listeners that are in Inner Classes or Anonymous Class Listeners.

Before attempting this project, be sure you have completed all of the reading assignments listed in the syllabus to date, participated in class, and thoroughly understand the examples throughout the sections of the chapters covered.

Project Requirements:

For this project you will need to demonstrate the working program to the instructor.

Upload the Java files that you created for this project via webtycho.

You need to submit a project report that includes:

- Cover sheet to include your name, class, date submitted, and a title.

- A screen capture of your working GUI design.

- Print out for all java files that you created for your project.

- I will only grade this assignment once so please make sure you have attached all documentation that you would like me to grade.

Program Requirements:

Create an event driven Java program that utilizes Swing classes for the GUI. Again start by creating the GUI first, which can be thought of an input/output menu for the user. Specifications for the Casino program are below:

You visited the Dynasty Casino http://www.tinian-dynasty.com in Tinian on your recent deployment. The cashier made a mistake counting your chips, so after talking with management, they have hired you to automate the chip counting using a computer program. They have contracted with you to create a chip counting program to will assist in cashing out client's chips. The Dynasty Casino has agreed to pay you one red chip per hour for this program contract.

The program will be started at the beginning of a cashier shift and be run on all cashier computers. The cashier will begin by entering their 6 digit CashierID. The program will assist the cashier by calculating the value of chips. You observe that the general sequence of events at the cashier window is as follows:

The customer submits to the cashier all chips to cash out. Chips are counted and the total value

of all chips is calculated based on the following values:

- Black = $5
- Blue = $20
- Red = $50
- Green = $100
- Gold = $500

The program will take the entered chip quantities and display the total number of chips and also the total monetary value of all chips entered.

The USA Internal Revenue Service has modified the tax code such that US Residents will now have tax withheld from all winnings at a rate determined by the residency of the gambler. This will require writing receipts for all customers when they buy chips. The customer will need to submit all receipts when they cash out at a cashier. The winnings are calculated by subtracting the receipt total from the chip value total.

If the customer has lost they are simply paid cash for all chips.

If the customer has won, the following information needs to be requested and calculations made to determine withholding tax based on the latest IRS regulations:

1. U.S. & Guam Residents will have 20% withholding tax on winning.
2. CNMI Residents will have 10% withholding tax on winnings.
3. All foreign residents will have no withholding tax on winnings.

Note the cash out is determined by subtracting the tax from the total chip value.

All input and output will be done through the GUI. For this program I would like you to try and write this program as one Java file. The program must display a set of formatted results to include all entered data to include receipts total, chip quantity by color, chip total value, winnings, tax withheld, and amount cashed out.

Additionally, the program needs to update a text file called CashierLog.txt listing the quantity of each colored chip. The total cash paid to customer and withheld for the IRS needs to be part of this logfile. Print the contents of your created CashierLog.txt. The final results will be printed as a well formatted customer receipt.